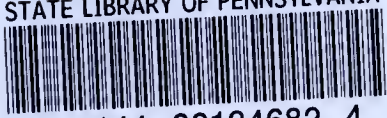


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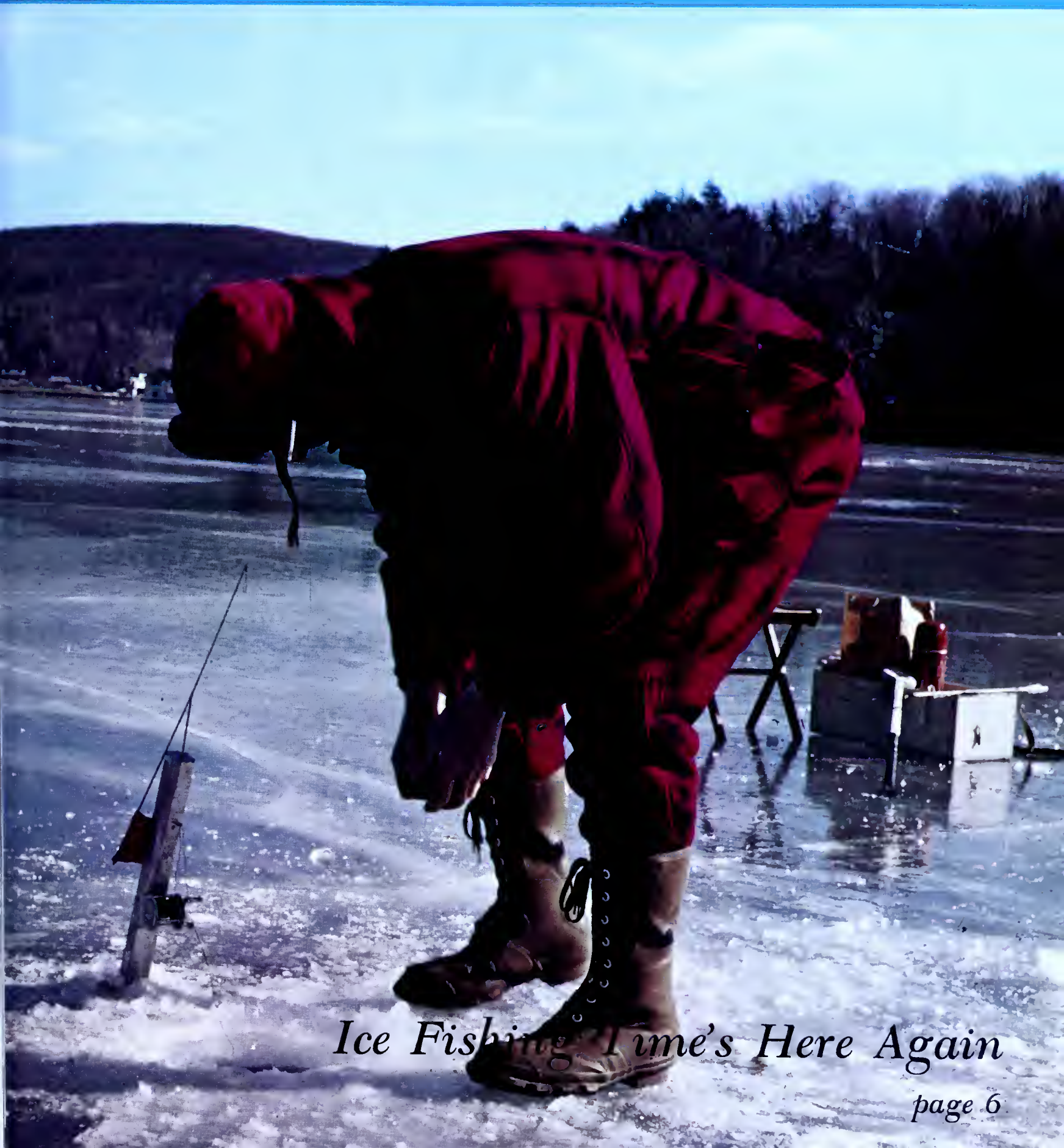
JANUARY, 1972

PENNSYLVANIA

Angler

the
Keystone State's
Official
FISHING·BOATING
Magazine...

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Single Copy



Ice Fishing Time's Here Again

page 6

CONSERVATION VIEWPOINT

by **ROBERT J. BIELO**
Executive Director



FAREWELL

In past years I have used the January "Viewpoint" to present a few New Year's Resolutions. This year when the January ANGLER goes to press I will no longer be the Executive Director of the Pennsylvania Fish Commission, thus this will be my last "Viewpoint" column.

Looking back briefly I recall that my early days at the Linesville Hatchery convinced me that the work of the Fish Culturist is a combination of hard physical labor, the endurance of extremes of heat and cold and a "Mother's" constant concern over the complex needs of the delicate stock being nurtured. Service as a Waterways Patrolman opened my eyes to pollution and the terrible toll untreated wastes of all kinds were taking of our priceless water resources. During this period I also had a chance to discover that while a few folks deliberately violated the laws established to protect our fisheries resources, most people willingly observed the laws and were genuinely interested in our fish and wildlife.

Later as a Fishery Biologist this interest of growing numbers of Pennsylvanians in the sound management of our natural resources became much more evident, although just ten years ago public concern of outdoors affairs was but a fraction of what it is today. Items of prime concern then involved the many actions of man leading to siltation of our streams and to the seemingly endless schemes to channel all waterways, obliterating most natural habitat for fish and other aquatic organisms.

Finally, as Executive Director of the Commission there came the opportunity to try and do something about these many problems that had persisted through the years.

I believe it is fair to say that in recent years we have made great strides to redevelop, improve, and expand our fish production facilities and to improve the lot of our dedicated Fish Culturists. Granted, much remains to be done, but the way has been cleared. I'm proud that we can point to the establishment of a thorough training program for our Waterways Patrolmen. They are fully uniformed, possibly not as elaborately as other conservation agents, but adequately. Few states can boast of having a better fleet of waterway patrol vessels. Again, upgrading and improvement of training, of uniforms, of equipment and working conditions must be a continuing process to maintain this important unit of the Commission in top form.

Few realize the extent of the Commission's acquisition program that has gained control of many major springs, numerous lake sites and dozens of access points on important fishing and boating waters. It is quite safe to say that the Commission's engineering force is second to none among the conservation agencies and is staffed and equipped to handle projects ranging from complex hatchery construction and design and construction of large dams, down to the routine act of servicing a remote access area. Our fishery management staff is still small and definitely needs expansion. Fortunately the men now manning this section of our fisheries unit all are capable of accepting added responsibilities and of leading others in vitally essential fishery investigations and management work.

On the administrative side of our operations, I have always believed it was better to have too few people on hand than too many. This philosophy has placed extra burdens on some, but has enabled development of a cohesive, hard working front office staff.

To sum up twenty-one years of service in a few paragraphs is difficult, as there seems so much to say. However, sum I must and in doing so I want to credit the success the Commission has achieved during my term as Director to the dedicated efforts of dozens of people in every unit of the organization. It must also be pointed out that many others outside the Commission have helped immeasurably in our success—the news media folks have been great—the Legislature has been generous—other state agencies have contributed much and as far back as I can remember, each Governor has frequently reached down to lend his helping hand when our struggles were getting too burdensome.

Pennsylvania's sportsmen as organized groups and as individuals have always been a source of support and inspiration to help us keep going.

Thus, twenty-one years have flown by swiftly—filled with a mixture of hard work, excitement, moments of exhaustion, a rare outrage at some action, the glow of achievement and, of course, some disappointments and failures. When summed up, these ingredients balance out as being *totally* rewarding. I'm very grateful for having had the opportunity to serve the Fish Commission, its people and our sportsmen.

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JANUARY, 1972

Volume 41/Number 1

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ON THE COVER—Lone ice fisherman on crisp, cold day at Harveys Lake, Luzerne County, is about to set the hook . . . flag's been tripped . . . it's just a matter of time before his prize will be flopping about on the ice. Kodachrome by the Editor

JAMES F. YODER, Editor / CHESTER A. PEYTON, Circulation Manager

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GOOD SHOW

There's no need to say the Angler is the best magazine around because everybody knows it. But just to stand up and be counted I also think it is. Jolly good show!

MIKE VADZEMNIEKS, E. Springfield

COHO GRATITUDE

I would like to express my gratitude to the Commission for supporting and sponsoring the Coho Salmon stocking program in Lake Pleasant and Union City Reservoir. This is a worthwhile project and should be maintained from year to year if at all possible.

I had my first experience catching this species this week-end at Lake Pleasant. My first Coho was a respectable 27 inch, 6¼ lbs. My fishing friend and I caught two other Coho, on the same trip, at 21 and 23 inches.

This transplanting project gives fishermen an opportunity to catch this truly game fish that might not normally have the chance to do so.

Once again you are to be congratulated on this worthwhile venture and the fishermen of the Commonwealth truly appreciate your efforts.

FRED B. THOMAS, Edinboro

QUESTIONS

I'd like to know why in-season stockings are announced in the papers as this seems like an open invitation for the truck followers. And couldn't the stockings be more scattered over an area instead of put in one spot? I realize this would be a little more work, but I believe it would be easy to get plenty of volunteers to help.

I'm also wondering whether it would be possible to get more wild brown trout in such high pressure streams as the Loyalsock, Lycoming Creek, etc. by putting fingerlings in the upper reaches of their tributaries. Would this help maintain a certain amount of wild trout to partially repopulate these streams?

Has the Fish Commission ever tried introducing landlocked salmon to any Pennsylvania streams. They seem like a hardy fish and are good fighters.

JOHN WEEKS, Williamsport

FINEST

I think the Angler is one of the finest magazines I have ever read. Your articles on boating as well as fishing and boating go hand in hand. I have had several close calls while fishing on large lakes as I fish in Canada several times a year and catch quite a few lake trout.

In cleaning a lake trout should the blood sack along the back bone be removed or left intact? A lot of the native Canadians claim it should be left intact. I always remove it when cleaning the trout. What do other Angler readers do?

LEWIS SHANEMAN, Pottsville

PRESERVE YOUR RIGHTS

I enjoyed the Angler and the articles and stories in it although I read with amazement the gripes about boating articles. But then I know these are selfish men who care only about themselves. We are losing too many of our rights because of a few gripers. I cringe when I see a Fly Fishing Only sign even though I consider myself a fly fisherman. By saying other fishermen have to stay out I feel as if I am taking away his rights to fish open waters. Only when "Bait Fishing Only" signs go up will I not feel guilty.

Only by looking after other people's rights can you preserve yours.

JOHN R. ARMAGOST, Fairless Hills

BIG LEHIGH

I'm writing these few lines to tell you that I enjoy your magazine very much, especially the fly tying articles. Although I may never tie all the flies that have been published, I make copies of these articles, and all others of special interest to me, and place them in several notebooks (binders) I keep. You see, I just don't care to rip "The Angler" apart. I save them.

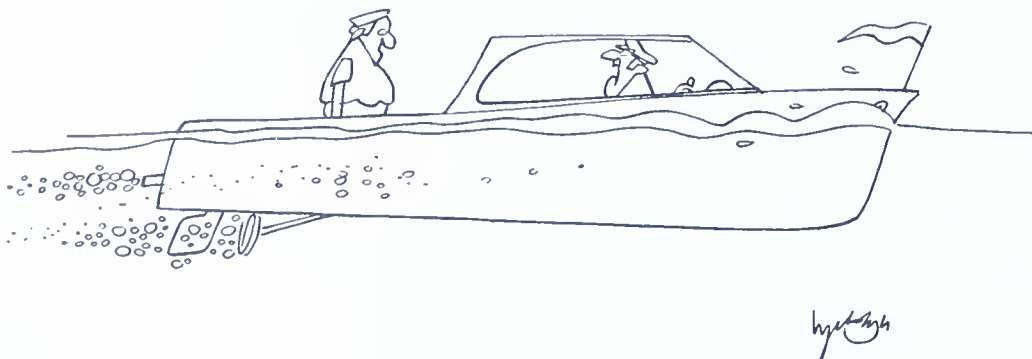
But, I also would like to ask a question of you. What of the future of the Lehigh River in Lehigh County? The potential recreational value of this body of water is tremendous, especially in the Allentown area below the Hamilton Street Bridge. Will there ever be an access there, or even above Hamilton Street Bridge? I know there is one at River Front Park and at Frick's Boat Landing, but you can't go downstream from these because of the dam. And it's a long haul upstream for a guy with a rowboat.

Could muskies be stocked in the River? There always seems to be an abundance of fallfish, suckers, catfish, etc. for forage.

Do you think a shad run could be introduced if fish ladders were installed at the dam in Easton? And whatever happened to the steelhead experiment undertaken by the Lehigh County Fish and Game Association? I wonder if any reached the ocean?

If an article about the "Big Lehigh" was written in the "Angler," I'm sure it would please the many subscribers in this metropolitan area.

THOMAS S. KADAS, Allentown



"... BETTER CHECK FOR A LEAK."

SUGGESTIONS

Let me congratulate you on the betterment of your magazine. It has improved over the years; but let me make a suggestion or two.

First, please keep Del & Lois Kerr as writers. I have saved practically all of their articles as they have given me *more information* as to fishing, camping and activities of my state than any other publication of your state. I have learned more as to places to fish, facilities of places to fish, and general information as to state parks and Fish Commission Lakes than any series of articles published.

Along with such as their articles I would like to see someone start a series of articles as to bodies of fishing waters making *no difference* between State Park Lakes and Fish Commission Lakes. These articles should contain information as to fish available, size of lake, facilities of lake as to launching of boat, camping if permitted, and general information of lake as to depth, weed growth and other pertinent information as to fishing. I know you have booklets giving some of this information but they do not have the personal interest as individual articles as to particular lakes would have, nor enough information to make it worth while to drive a couple hundred miles to find out. In addition, there is too much made of the fact that Park (State) Lakes and Fish Commission are different. To a fisherman it doesn't make any difference who owns them or controls them as long as it is fishable.

I would like to see all fishing seasons open all year! Here's why. First, a breeding fish (bass) is in the vicinity of 12 inches long and three or four years old. Why not make the size limit of bass 12 inches and eliminate the catching of non-breeding fish? Who can be proud of catching one or even a limit of nine inch fish? Fishing is not seeing how many fish you can catch but the pleasure of catching fish.

Second, the pickerel and walleye, musky and pike seasons open early. Who are we kidding? Many of those fishermen take home all the nice bass they catch. Many are fishing just as much for bass as anything else.

No lake has even been fished out by fishermen. Catching fish during breeding season has never hurt our



"ICE FISHING? I DON'T CARE TO FISH FOR ICE."

lakes. Your opening of the pike season is at the beginning of the bass breeding season and disturbs the bass just as much as fishing for them would do and if the water is too cold the bass won't bite, so opening the season early won't hurt. The middle of June, as the hot weather is moving in, gives the fisherman a poor chance. In fact, if we have a late spring as to cold weather the bass are still on the nests, so what is the gain of a late season?

CLAIR SCHOFIELD, Easton

NETMAKING

I read and enjoy all the articles in the Angler, so keep it coming.

A reader in Canada wanted to know of a book on net making and I am sure other readers will want to try this easy hobby.

I started with a catalog from:

Netcraft Co.
3101 Sylvania Avenue
Soledo, Ohio 43613

They list net making kits and supplies.

WALTER C. BIGHAM, Gettysburg

"BARGAIN"

Enclosed is my \$5.00 for three years of good reading in the Pennsylvania Angler. Other than myself and my wife, I pass it on to my son and daughter-in-law and two fine grandsons, and they cherish and read and enjoy it very much. Actually I call it a half price "bargain" in that it entails and services two families. Keep up the good work!

CHARLIE SKEEBEY, Williamsport

COMMENDABLE

During the past summer I worked closely with Melvin Burris your foreman of the Tarentum Point Park Access job. When a man does a good job he should be commended for his effort and in my dealings with Mr. Burris I found him and his crew to be the hardest working and most cooperative group of men I ever had the pleasure of associating with. It is commendable that with all of the criticism given in regard to public employees, this crew is a group that still gives better than a fair days' work for a fair days' wages. I commend you and the men of your organization.

MICHAEL DAVIDEK,
Vice President of Council
Borough of Tarentum

EEL FISHING

I have been fishing ever since I was a boy and I never caught any eel although I have always tried to until last year and my wife and I tried the Narrows bridge in Bedford, in the Raystown branch of the Juniata River. I caught one there, but no more, so another one day we went fishing where I had fished as a boy. As we were standing along the bank, looking into the water, my wife spotted an eel. It was! That evening we caught six or seven. From June to September we caught somewhere around 80.

We find it very exciting, especially when you catch two 30-inch eels on the same line! You can ask for no more in fishing. And they are really good eating.

MR. RAYMOND HARRIS, Bedford



FISHING OUTLOOK

By-- Stan Paulakovich

ICE FISHING

Get your new fishing license yet? We have them in stock and they are really beauties. They make nice presents too, either to give or to get.

When you talk about January fishing, you've got to talk about fishing through the ice. There's some open water fishing now, but it's limited. Way down the list of the fish that are most sought after in January are the black and white crappies. Good biters through the ice and excellent table fare, they offer plenty of excitement.

Like any other kind of fishing, if you're going to catch crappie, you've got to know where the fish are. You can chop or drill holes through the ice until your arms feel like they are ready to fall off and if you're not over fish, you won't catch any.

During the winter months crappie frequent waters in the 10 to 15 foot range. They like plenty of cover, rock ledges, brush piles, weed beds, boulders, sunken logs or stumps are ideal. Because of the low water temperatures they don't move around much. Some light and water with good oxygen content and cover to protect them is what they seek. Think back to last May when you caught crappies at that certain stump or rock pile and you can bet that they will be back there now.

The biggest mistake made in winter fishing for crappie is in the size of the bait used. You would think that if you use bigger minnows, you will catch bigger crappie. It doesn't work that way. Big minnows don't catch any crappie. The choice size minnow is from 1 to 1½ inches long. These are pretty delicate so use a small hook in fishing. Size 12 or 14 is good. When the minnows are spent don't throw them away, save them. Jigging with live minnows is best but sometimes the fish are biting so well that even dead ones work.

Don't be in any hurry. Up and down 6 inches or so at a time is enough. Strips cut from the belly of

fish that you have already caught (the size of a minnow) artificial minnows, small metal jigs and spoons, meal worms and other bait also take some fish jigging. Not with the consistency of live minnows though.

Harold Corbin, Chief of Law Enforcement for the Commission and his wife Mary are dedicated to ice fishing. It's never too cold or windy for them to be out on the lake. They prefer catching the pan fishes like perch, crappie, or blue gill. Over the years they have made some interesting observations and reached certain conclusions on ice fishing, especially about their favorite spot, Raystown Dam in Huntingdon County. They find that black crappie usually bite better during the daylight hours. White crappie are better biters after dark.

Here in Pennsylvania there are few night fishermen on the ice for crappie. Over in Ohio where crappie fishing is great sport, most of the fishing is done after dark. The Corbins believe that the amount of light in the water has a lot to do with how readily the fish hit. If the ice has a covering of snow shovel it off in a circle to allow more light to penetrate the ice. After dark, Coleman lanterns are suspended from poles about 5 feet over the ice. This helps too. They catch very few fish below the 10 to 12 foot depth range and they feel this is the deepest point in the water where light enters. At the beginning, tip ups are set at all different depths. When several fish are caught on one set, all tip ups are fished in this range. This is the depth where jigging is done too.

When fishing through the ice with tip ups or with a jigging rod, don't use that heavy 10 pound test cable that comes with most outfits. Get yourself some nice limp 2 or 3 pound test nylon and add just the tiniest of split shot to keep the bait down. Fish don't get any dumber in the winter time. When you do locate a good crappie hole, get your tip ups set all in the same area. Mark this spot in some

manner so you can find it the next trip. Drop a weight down to the bottom before starting to see if you're in the right depth range.

Pymatuning Lake in Western Pennsylvania is one of the best Crappie lakes in the state. Generally shallow, 20 feet or so, it also has Blue Gills, Perch, Walleye and Musky to offer. Wallenpaupack in Pike and Wayne counties has blue gill, perch, walleye, chain pickerel and trout as well as plenty of crappie. Ontelaunee Reservoir, the source of Readings' water supply, is open to shoreline fishing during the summer months. Being a waterfowl sanctuary it is closed to all fishing from October 1 to December 31. On January 1 it opens to ice fishing and this makes plenty of areas accessible that fishermen normally don't reach. Several spots are restricted zones on the lake and these are all well posted. There are plenty of crappie here with blue gill, perch and an occasional largemouth hitting through the ice. There are also some monster northern pike in the lake too.

Out in Cambria County, Glendale Dam in Prince Gallitzin State Park is just starting to come into its own as a good crappie lake. The lake is off Route 36 near the town of Patton and covers 1640 acres. Built in the early sixties, Glendale's deepest spot is around 40 feet. Average depths range from 10 to 12 feet with plenty of cover in the lake.

Last year's winter season was the first real good one for fishermen who concentrated on crappie. The fish averaged 9 to 10 inches then, not huge, but just the right size for delicious eating. Live minnows on tip ups and jigging caught the most fish. Some nice walleye, up to 27 inches, and surprisingly quite a few large mouth bass were also caught.

The Slate Lick Arm, near the breast of the dam, was the hot spot last year and should be good again now. Ice cover last year was between 20 to 24 inches. Bait shops normally close after the fall season so bring along your own bait. Waterways Patrolman Tony Murawski, Box 32, Ebensburg 15931 phone 814-472-6180 says that if this past summer's crappie fishing can be used as an example then winter fishing in Glendale for crappie will be out of this world this year.

COMING—

NEW LICENSES

Now is the time when Pennsylvania fishermen will be needing new fishing licenses, at least if planning to do any fishing right away. The 1971 license expired with the end of the year. New licenses are on sale at issuing agents throughout the Commonwealth. Buy one for yourself—and one for a friend!

ICE FISHING

This is the time for ice fishing and if you've never enjoyed it before now is the time to get started. A couple of stories in this issue feature ice fishing themes. Be sure to read Tom Eggler's "Ice Fishing" if you're new to the sport. It starts on the next page. And if you're just trying to get the "urge" to get out take a look at the photos on pages 16 and 17. And more is scheduled for February!

RECREATIONAL SHOWS

Beginning late this month and running through February and into March, a number of shows will be held in major cities of Pennsylvania. They'll feature everything from the latest in ski boats to all sorts of tackle, rec vehicles and the like. Make plans to attend one, if possible. They're interesting!

BOATING SAFETY CLASSES

If your interests are with boating or if you only use a boat as a fishing tool you should plan to attend one of the many Safe Boating Courses that will be held this winter. Pennsylvania Fish Commission officers as well as Coast Guard Auxiliary and U.S. Power Squadrons will be offering courses in safe boating. Even well informed boaters can benefit and newcomers to the sport should make every effort to attend. The lessons learned could easily help prevent an accident next summer.

FISHING SCHOOLS

Experienced fishermen as well as beginners can enjoy as well as learn at one of the many Fishing Schools the Pennsylvania Fish Commission will be holding this winter. Most Waterways Patrolmen plan at least one school in their district during the winter and many hold several. Dyed in the wool trout fishermen can learn how to catch bass, muskies or other warmwater species as well as the reverse. Beginners can learn to catch everything!



Great Winter Sports

ICE FISHING

by
Tom
Eggler

What does a fisherman do when ice covers his favorite lake?

Well some stay tucked up in a snug living room before a favorite TV show. Others may putter around a home shop or perhaps drift into one of the local pubs for conversation with other idle ones. Many may even have been bitten by the snowmobile bug and be romping through the wilds on an expensive high powered machine while a few who enjoy hunting as well will probably be feeding game.

But more and more each year are discovering the fun of ice fishing. It's not the sort of sport that appeals to everyone and many, when first considering it, don't really have much faith in being able to enjoy an hour, afternoon, or day on some cold, windswept lake.

Perhaps that's why it's taken so many years for the sport to really take hold—not just in Pennsylvania, but throughout all snowbelt states as well. But the hardcore group of men who have enjoyed catching fish through the ice for years and years are being joined by an increasing number



of newcomers who may at first have decided to try it as a diversion to a weekend afternoon of boredom and then discovered it a really great sport.

There are a couple of golden rules to follow if you're planning to give ice fishing a try for the first time. Paying attention to each can mean the difference between fun or disappointment.

First—absolutely first—dress for the weather. Don't plan on spending an enjoyable hour or more on a cold lake (or anywhere outdoors) if you're not wearing the right clothing.

In this day and age the right clothing isn't hard to find. The growth of snowmobiling has focused a tremendous amount of attention on winter clothing, probably more than all other outdoor winter sports combined. Manufacturers, realizing the great need and market for truly effective winter wear, have come up with a vast variety of clothing that will keep the outdoorsman comfortable, no matter what the weather.

Dressing properly is probably also the single most expensive thing connected with ice fishing because, like anything else, good quality products cost more money than poor ones. That doesn't mean it's necessary to buy the most expensive boots, coats, underwear, pants or anything else, but it does mean it probably isn't a good investment to buy the cheapest products available, particularly if they will see very much use.

Of course the ice fisherman or prospective ice fisherman who also snowmobiles, skis, hunts, traps, camps, works, or spends anytime at all outdoors in the winter can get "multiple use" out of good garments that serve well for several different activities.

Golden rule number one then, is to very carefully select and shop for the clothing you'll be using.

The second golden rule is to learn something about ice fishing. Like most sports, for a successful outcome it is necessary to know how to play the game and win. Winning—catching fish—while ice fishing requires more than just wandering off to a nearby lake, cutting a hole in the ice, and dropping one or another kind of bait in.

It doesn't always follow that the man who handles a fly or spinning rod well and who catches fish this way will likewise be successful when it comes to ice fishing. In one sense it's a different ballgame and that's probably why many warm season fishermen just don't make out on the ice. They try playing the game by a set of rules that just weren't made for the ice fishing game.

There are a number of ways to learn how to be successful ice fishing, but probably one of the quickest is to locate another fisherman who knows his ice fishing well and then pump him for all the information you can. Most will be more than ready to do all they can to help which may well include taking a newcomer to the sport along for a first hand lesson.

Don't know any ice fishermen? The answer to that is

simple. Just bundle up in those warm clothes you carefully selected and head for a popular ice fishing lake. Wander around and talk with some of the men on the ice (particularly those who have fish) and you'll be surprised at what you can learn.

You can also visit a local tackle shop, but be sure to pick out one that sells ice fishing gear. A tackle shop that doesn't sell ice fishing equipment probably won't be of much value. In fact the best bet here is to pick out a store that depends entirely or at least to a great extent on outdoor gear as a main source of sales. And if the store is exclusively one dealing in fishing tackle so much the better.

A shopkeeper who depends on repeat tackle sales will probably know plenty about the sport. Many are sportsmen who became so engrossed with their outdoor activities that they decided to make a living at it. Most will have first hand experience and even if they don't get a chance to fish as much as they might like they will at least know from conversations with other customers where the action is as well as what terminal tackle is catching the fish.

Most will be very helpful in selecting the gear you need. Like all retail business they of course depend on sales and the more the better but very few will really try to overload a newcomer with gear he doesn't need. After all they know that repeat business and happy customers can make or break them and most would probably rather see you come back again and again than oversell you the first time.

Do remember one thing about buying ice fishing tackle—it is probably the least expensive form of fishing for the beginner. In fact much of the gear can either be made in a simple home workshop or adapted from old gear used at other times of year.

If you can't find some other ice fisherman or a good tackle shop to help you get started, then turn to another source of information that should be included anyway. Read!

There are books on everything nowadays and ice fishing is no exception. Likewise many outdoor magazines publish story after story on ice fishing at this time of year. Some will be about places to fish; others will be about how to ice fish.

The "how-to" articles will probably be most helpful to newcomers; the ones about places to fish may provide some good clues on where to go, although no one in Pennsylvania should have to travel far to find good ice fishing. At any rate the more you read, the more you should learn. Read all you come across.

Golden rule number two then, is to learn all you can about the sport—one way or another—before you start.

It's not the purpose of this article to tell you how or where to ice fish. Either is subject material for a story, or several of them.

Just remember to get started right—dress warmly and learn all you can before heading for the nearest lake!



CATCH MORE FISH!

READ THE WATER

by

L. James Bashline

There certainly is more to catching nice fish than luck. Part of the secret is knowing where to fish and the angler who pays careful attention to learning where fish are found usually won't get "skunked" too often.



People are traveling more these days. And since fishermen are people it follows that more anglers are finding themselves on unfamiliar water.

Most people who are also fishermen carry some tackle in their autos if they travel by that method. These same travelers, if they are trout fishermen, have a fine opportunity to sample some streams that they know little or nothing about. Occasionally they luck into some outstanding successes but more often the stop-and-fish-awhile technique produces nothing.

That's not the case with a good friend of mine who happens to be on the road during most of the fishing season. He grew up in southern New York state just a whisker north of Pennsylvania and it must be admitted that he had a childhood full of trout fishing experiences. He catches trout just about everywhere he visits in our state and the chief reason for his outstanding success is his ability to read the water.

If there are trout in a given stream he can usually figure just about where they ought to be at a given time.

The ability to read the water is not a divine gift bestowed upon Indian guides, young boys or bald octogenarians who sit around courthouse benches telling us how great it used to be when they were lads. We can do it, yes . . . even you and I, if we learn a few basics and then apply them.

Anyone with a reasonable amount of coordination can learn to cast a fly well enough to catch trout. Really fine tackle is available at modest prices today and fishing technique is dished out to us in copious amounts each month in the outdoor magazines (including this one). The difference in creel contents when comparing yours with my traveling salesman's lies in his ability to read the water. He learned his lessons on the tiny brook trout streams of northern Pennsylvania many years ago and they stuck with him. Most of those same lessons still apply no matter where he happens to string up a rod. Trout are no smarter than they used to be. They are still being fooled by the same tricks that worked 50 or 100 years ago.

THE SMALL STREAM OR BROOK

All trout are concerned with four things only. Eating, reproducing, finding a suitable water temperature and hiding from enemies. A walk beside a small brook can

prove this very quickly. Small stream trout are seldom found in the fast dancing water or slower shallow stretches between pools. Too much effort is required to maintain their position in the fast parts and they are vulnerable to their enemies. Food does not congregate there nor do they have a hiding place. Look for trout in the deeper pockets near submerged rocks, logs and other obstructions. When surface food is obvious such as mayflies, stoneflies or grasshoppers they will move a distance away from the hiding places but not always. If you've not done a little chumming with grasshoppers by all means give it a try. Don't show your silhouette and toss a grasshopper into a likely looking pool. If you're positioned so you can watch the proceedings, you'll frequently see a blur of motion come out from under a rock or log and the grasshopper vanishes with a splash. If the water is clear and the light is right you'll see the trout return to exactly the same hiding place to swallow his prize. He's not going to dally around out there in open water and wait for some other fish to take his meal away from him nor does he want a blue heron snapping him up for *his* dinner.

If the pool is a long one expect to find the smaller fish at the head of the pool and the better fish at the tail end. Experience has taught the older, wiser fish that they'd better get a good look at what's floating down before they grab it. The younger, more careless fish will position themselves at the head of the pool to seize whatever the current provides. This positioning of fish is what causes most of us to catch the smaller fish and frequently miss out on the bigger ones. It is an almost uncontrollable urge to cast to the head end of a pool rather than work out the lower reaches first. The snazzy cast that we make to the sparkling water at the head of the pool is the very cast that spooks the "big daddy" that's hanging just to the left or right of the tail water.

Occasionally you will find a good fish in a fast run but invariably he'll be positioned behind or just in front of some obstruction. Eight inches seems to be about the magic figure for trout holding depth although I have no scientific evidence to back this up. It just seems that way after thirty years to small stream fishing. My salesman friend agrees except during very low water conditions during the late summer when the trout of necessity will be congregated in the deepest holes available. As a general rule look for trout in a small stream at places having eight inches or more water cover and no more than six feet away from a secure hiding place. Sounds relatively simple on paper but only practice walking along strange streams will give that in-service training that breeds proficiency. What a wonderful way to learn!

BIGGER WATERS

On the larger streams and rivers the situation becomes slightly more complicated because of the greater volume of water. Larger fish will still be not far from a good sized pool or other good hiding place but they can be a bit further away because the greater depth offers them more time to escape. (An osprey has a much more difficult time seizing a trout in three feet of water than he does in three inches.)

continued next page

READ THE WATER

Out in the middle of a long slick glide, the trout will almost invariably be found near submerged rocks or other objects offering a quick escape. They will usually lie just ahead of or behind such obstructions because this gives them one less direction to worry about. Nothing is going to capture them by coming through that rock! Aha! This flaw in the trout's reasoning can work to the stream reader's advantage.

If you can keep something between you and the fish's line of vision and still manage a cast, you are one jump ahead of the game. A bush, a tree trunk, a large rock . . . anything that's convenient will serve the purpose. If nothing is available to hide behind, try to take advantage of your background. Wear neutral colored clothing and try



At position A the trout behind the rock in the left illustration above feels a measure of security and will stick pretty close to such an obstruction in a small stream. Water to the left and right of the large stone is usually too shallow to hold a fish. Just below the log which forms a small waterfall (at position B), small trout congregate to pick up the food coming over. The undercut bank at position C is in slack water and can hold a good fish. The right way to fish for him is to dap the fly or bait over the grass. The best fish in the pool at position D must be cast to (cautiously) from the far side of the stream. Below is a side or profile view of the same section of stream as shown above left. In the larger streams (above right) look for the darker colored water. This usually means a deep pocket. Fish these areas with more care than the shallow water in between. The fish at position A and just below the sunken rock wing dam at position C can best be reached with an upstream cast while the fish behind the boulder at position B can best be coaxed out with a downstream approach. When a good hatch of flies is on the surface, the fish at A and B will sometimes move into the shallow water to the left or right of their resting places. They will always return to their hiding places when hooked or when surface activity ceases.

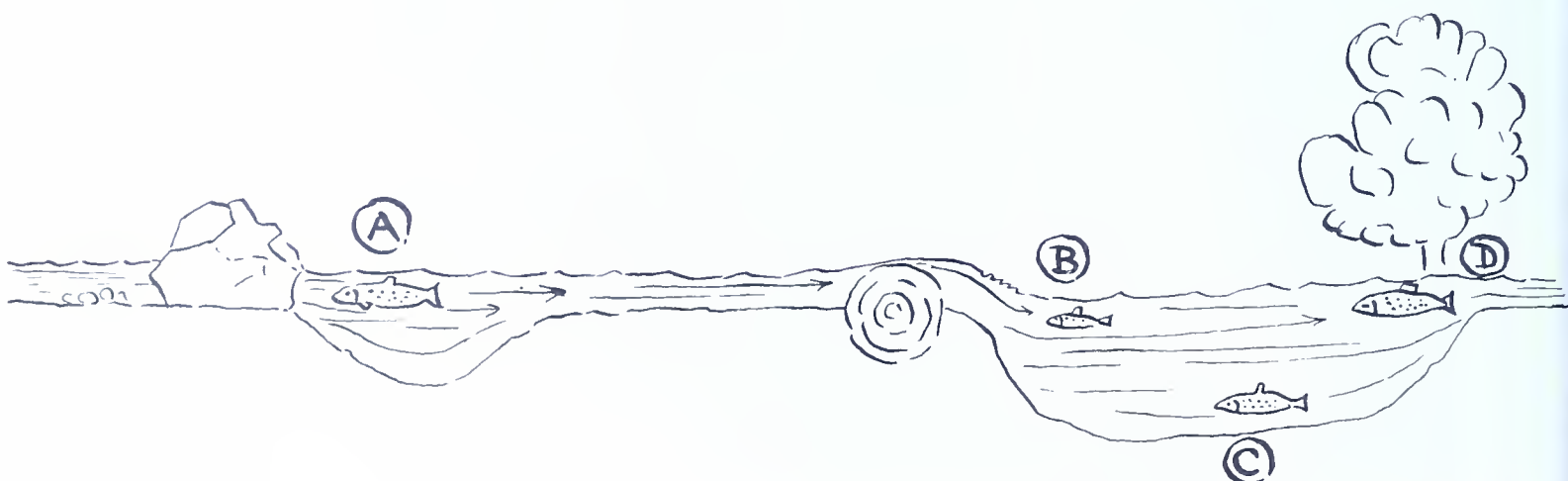
not to stick your head above the tallest shrub. What you're trying to avoid is the outline of your profile against the sky.

In all water depths look for the places fast water butts up against still or slow water. A depression in the stream bed will sometimes cause an isolated eddy to form in the center of a reasonably fast stretch of water. Right where the rippling water meets the quiet pocket is an excellent place to cast. If a good hatch is on, watch such places carefully. The rise of even a large fish will seldom make much of a splash in locations like this. The fish rests in the quiet water and merely turns his head into the current to pick off the hapless insect that comes floating by. This is a made to order situation for the dry fly caster since the broken water will diffuse his outline and if his pattern is right, the fish will frequently take the fly with a positive gulp.

On the long rippling stretches, watch water *color* very carefully. No matter what the bottom is like, the deeper water pockets will appear to be much darker than the surrounding water. Salmon fishermen learn that trick early in life or they don't catch many salmon. Trout fishermen would do well to copy them. Concentrate on these pockets when you're just fishing the water and return to them when the evening rise begins. Odds are, that is where the trout will be hopping.

There are many special situations that the traveling fisherman will encounter that will tax all his skill. I once fished a stream in McKean County, for example, that produced fish only on the west bank. Many of the better looking pockets (I was attempting to read the stream) were on the east shore but I couldn't get a tumble. Luckily, I found out what the reason was before I had to leave. A spring run was dumping into the creek about a quarter mile upstream and the cool flume of water was following the west bank for some distance down stream before it mixed completely with the regular stream temperature. This was in late August and the more comfortable water was on the west bank . . . so that's where the trout were.

Fascinating, this trout fishing game. I hope it always will continue to be so. When the visiting fisherman (you, in this case) makes the right analysis on a strange section of water, savor the moment. You have read the water, done a few other things right and, for the moment at least, you have once again proven that man is as clever as a trout.



WHAT . . .

by Margery Evernden

Shall We Name Our Camp?

"What shall we name our camp?"

To our shame the question goes unanswered.

For ten years we have enjoyed our snug hideaway on the Upper Allegheny, sharing the neighborhood with squirrels, "grinnies", rabbits, possums, visiting deer and even an occasional black bear. Still no christening is scheduled. No name has seemed adequate or right.

Other owners appear to share our problem, though some shrug if off. One river-side camp I've noticed bears the sign "Unamit". A cop-out, for certain! Another is labeled "Camp What". "R Camp", appearing frequently, is hardly more inspired.

Fortunately for those of us who spend leisurely and inquisitive hours on our forest roads and rivers, many camp owners display far livelier imaginations and/or civic pride. Collecting camp names has become for me an intriguing hobby.

Some names I note are frankly patriotic. "Liberty Dell" rings a bell for Pennsylvanians, as does "The Keystone". "Steel City" needs no interpretation. "Ligonier" is a reminder of that lovely Westmoreland County town. "Bimber Lodge" is proudly local, situated on the banks of Bimber Run near Bimber Corners!

Other camps honor their owners. "Donna's Dump", a trifle glum, is balanced by "Mark's Mansion". I would expect Irish wit by the fire with "Pat and Peg", as also at "Merry Mac's". "Abe and Babe" sound practical and down-to-earth, "Camp Mari-Ann" primly proper. "Chubby's Camp" promises good eating. "The 7 P's" with friends and relations must overflow their camp.

Some names are obvious concoctions. Despite its Indian overtones, "Mapasabi Lodge" uses, so I would guess, the syllables of family names, with "Ma" at the head of the list. Ed and Dora have opted for the brief but lilting "Edora". "Wilmar" is surely so contrived.

Probably the largest number of names have been inspired by nature. "Chedabe Pines", "Pinehurst", "Pine-wood", "Circle Pine", "Knotty Pines", not to speak of "Twin Pines", "Broken Pine", "Pine Haven", "Ponderosa" and "Hemlock Lodge", all ring the change on the evergreens. Deciduous trees appear to get less attention, but I have noticed among others "Red Oak Lane" and "Camp Acorn", "Clear Aspen", "Camp Elm" and "Locust Grove",

Animals are legion, though owners' viewpoints seem to vary. Boastful "Camp Bucko" and "Big Buck" are just down the road from the wry hunters at "Camp Pass the Buck". "Deer Haven" and "Fawn View" may be only lures for unwary hoofers. "Camp Bruin" and "Camp Beaver" are clearly native, though "Bull Dog" is not and "Rose Bud" seems more appropriate for a suburban cottage.

Other names are pleasantly moody. "Camp Smoke" ignores pollution. "Camp Clouds" sounds great for dreamy relaxation. So, also, "Lazee Daze".

The last name may, of course, belong not to my list of nature names but to that most intriguing category of all—the punny signs.

Some puns are easily deciphered. "Doc's Inn" is no puzzle with its silhouette of a weiner dog. "Met-Chu-Inn" is clear enough, its carnivorous owner more cheerfully optimistic than the stray fishermen who camp nearby under the disconsolate signs of "Camp Cant Catchem" and "U Ketchup". "Der-Hut" also qualifies as obvious. And "Earl-y's Birds".

But "Tilicum"? I had to say that one aloud. The same for "Camp Tokumto". To appreciate "Tidi-inn" I remind myself that it is located near the village of Tidioute! A few puns I've not yet unraveled and so choose not to share.

Mood names constitute my final category.

Though "Hard Luck" looks sadly accurate, some of these names are modest, under-stated. "Camp Dale", "Camp Retreat", "Camp Pleasant", "The Kozy", "The Happy Hour", "The Echo", though inviting, are surely not owned by ad-men.

"Blarney Castle" is more hard sell, as is "Hell's a Fire"—if you've a taste for flames. Others are frankly prideful. No one could ask for more than "Paradise"—or "Polack Heaven".

But wait . . .

Just this week by a tiny, tree-shaded house, cuddled on a knoll above the river, I saw a sign lettered "Tapawingo".

In this harried world surely the ultimate claim! "Tapawingo"—the Red man's word for "*Place of Peace*"!

Come to think of it, maybe we'll schedule a camp christening, after all. Where could we find a better name?

PENNSYLVANIA'S MOST FAMOUS FISHERMAN

Around the turn of this century two young men discovered a beautiful river in the rolling hills of eastern Pennsylvania. One was a struggling dentist; the other a baseball player. They both loved fishing, canoeing and the outdoors. Most of their spare time was spent fishing in the Delaware River, which forms part of the boundary between Pennsylvania and New York.

The dentist was Dr. Zane Grey who had an office at 100 West 74th street in New York City. The other fisherman was his brother Romer "R.C." Grey. Their favorite spot was the confluence of the Delaware and Lackawaxen Rivers.

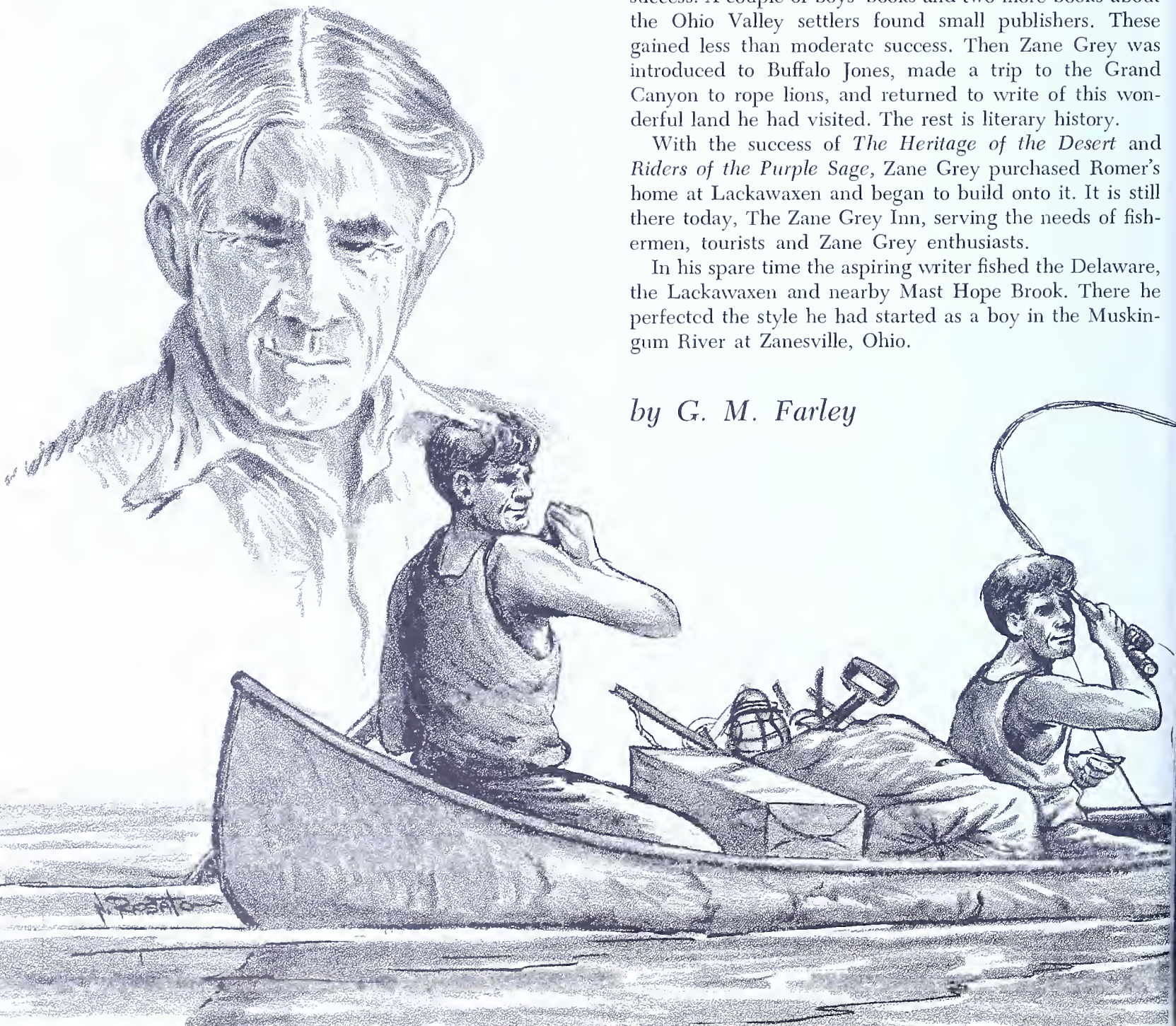
While fishing one warm summer day in 1900, they met some girls, and after a five year courtship Dr. Grey married one of them. Her name was Lina Elise Roth, but she became better known as "Dolly."

In 1902 Zane Grey's first story, "A Day on the Delaware," was published. He decided to write a book and chose for his subject the story of his great, great aunt. The book *Betty Zane* was published in 1903. Two years later, following their marriage, Zane and Dolly purchased what became known as "Cottage Point" at Lackawaxen and Dr. Grey gave up his dental practice to devote his full time to writing. The next few years were filled with hard work and keen disappointments. Several stories and articles found their way into print, but they did not bring success. A couple of boys' books and two more books about the Ohio Valley settlers found small publishers. These gained less than moderate success. Then Zane Grey was introduced to Buffalo Jones, made a trip to the Grand Canyon to rope lions, and returned to write of this wonderful land he had visited. The rest is literary history.

With the success of *The Heritage of the Desert* and *Riders of the Purple Sage*, Zane Grey purchased Romer's home at Lackawaxen and began to build onto it. It is still there today, The Zane Grey Inn, serving the needs of fishermen, tourists and Zane Grey enthusiasts.

In his spare time the aspiring writer fished the Delaware, the Lackawaxen and nearby Mast Hope Brook. There he perfected the style he had started as a boy in the Muskingum River at Zanesville, Ohio.

by G. M. Farley



In Grey's time Lackawaxen could only be reached by rail or perhaps a trail through the beautiful, templed Pennsylvania mountains. Today New York Route 97 and Pennsylvania Route 590 meet at Lackawaxen. Every summer hundreds of people visit Zane Grey's old home and hundreds more fish the Delaware's waters—many of them never realizing the fame ultimately gained as an angler by the man who had such a humble beginning.

Dolly Grey had inherited a sum of money, and Zane made a little from his writing in the early days. Somehow he managed to make periodic trips to Long Key, Florida with R.C. They caught sail fish in the Gulf Stream, tarpon in the rivers of the Everglades and helped pioneer the art of bonefishing. Zane traveled down the Santa Rosa, an unexplored Mexican river, and fished off the coasts of Yucatan, Nassau, and Cuba. But always he returned to the Delaware.

Then he met fame and fortune and began to cross the continent to fish for tuna and swordfish off California's Catalina Island. He also fished off the eastern coast of the United States, and eventually went to Nova Scotia where he caught the world's record tuna. He wrote about this exploit in his book *Tales of Swordfish and Tuna*.

Grey bought a home in Middletown, New York, at 101 South Street and divided his time between there and Lackawaxen until 1918 when he moved his family to California. Eventually he bought a large house at 396 East Mariposa Street, Altadena, California. This home was only recently sold by Zane Grey, Inc.

From here Zane Grey could pursue his passion. He fished the Pacific and went north to the rivers of Oregon, Washington, and Vancouver Island. His fame as a fisherman spread, mostly from the articles he wrote for such magazines as "Field and Stream." His name on the front of any magazines meant added sales. He became a world famous figure, his name a household word.

Then he began to break the big game fishing records and newspapers carried the pictures and stories. At one time or another, he held all of the big game fishing records, and at least one still stands today.

In 1924 Grey returned to Nova Scotia to fulfill a long time dream. He purchased a large three-master schooner, renamed it *Fisherman*, and had her reconditioned at a cost of forty-thousand dollars, more than twice the purchase price. The first cruise was to the Galapagos Islands via the Cocos Islands. The waters surrounding the Cocos Islands were so shark infested that they finally hauled anchor and sailed on to explore and fish the Galapagos. Here they met with better success, even catching new species of fish.

Zane Grey did not permit his fishing to interfere with earning his livelihood, in fact it supplemented it by magazine sales of his experiences. He would rise early, sometimes hours before anyone else, and work on his stories and books. No one was permitted to disturb him during his writing sessions. Then after breakfast, he would fish.

The waters of beautiful Tahiti felt the impact of his Waltonian talents. Here he hooked and landed, after considerable battle, a giant Tahitian striped Marlin weighing 1,040 pounds. Actually it weighed more but sharks got to the fish before it could be landed and chewed off a few hundred pounds rendering it unacceptable for a record. It was here also that he caught and named the silver Marlin, a new species. He became so enhanced with Tahiti that he purchased land and built a cottage.

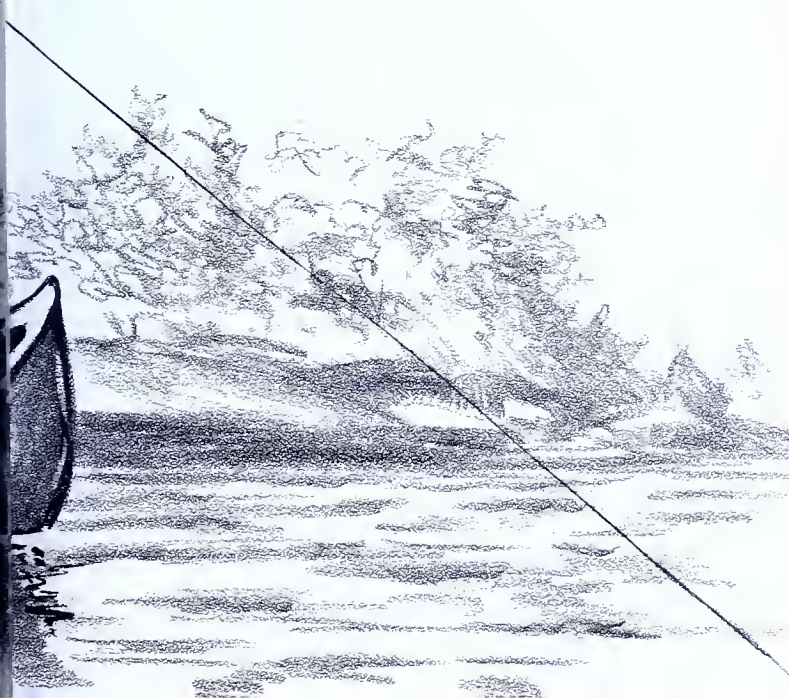
As his fame as a writer of western stories grew so did his fame as a fisherman. New Zealand and Australia prevailed upon him to fish their waters. The publicity would do more for them than all of their chambers of commerce combined. Grey availed himself of these opportunities and again broke records by landing a 1,036 pound tiger shark on rod and reel. He wrote books about these ventures, which today are rare collector's items.

It was during his Australian sojourn that Zane Grey wrote a story especially for the Australian movie industry and then played the starring role in the picture. The movie was called "White Death" and was the story of a monstrous white shark that terrorized the people and killed several. Zane Grey's help is sought in ridding the Australian waters of this menace. Grey fished unsuccessfully for days for such a fish, and eventually did the battle with a specially made rubber shark. It was a comedy and according to Australian reviews, achieved the desired end. Grey also wrote another story for the Australian movies. It starred Victor Jory and was titled "Rangle River."

In 1937 while fishing Oregon's Umpqua River, Zane Grey had a heart attack which left him totally paralyzed for some time. He continued to dictate stories and gradually the paralysis left until he was able to write and fish again. Doctors urged him to take it easy, but he had always held to the belief that strenuous labor induced good health. On the morning of October 23, 1939, Zane Grey suffered another attack and died at his Altadena home. Dolly Grey made the simple entry in her diary: "Z. G. died this morning at seven-thirty A.M."

Although Grey reached the peak of his popularity in the 1920's, his fame did not suffer greatly after his death. His books continued to sell and new books were published yearly, except for one year, until 1963 when *Boulder Dam* depleted the stock of Zane Grey westerns. One by one his

continued on page 18





Speeding along a Pennsylvania waterway can be a lot of fun, but didn't you ever wonder just how fast you were going? A little calculation by this method will help you find out.

New Method for *MEASURING BOAT SPEED*

by Calvin A. DeViney

Here's a short cut method that will enable you to time your powerboat's speed. It utilizes waterway markers such as pilings and buoys, and the Coast Guard assures us that these charted locations are sufficiently accurate for all practical purposes.

First, throw out all your old ideas about measuring distances. Learn to think of distances in terms of time. Think of a mile as being 3,600 seconds "long."

If you run a mile, then divide the required seconds for the run into 3,600, you have your speed in one simple computation.

It doesn't matter how you measure the mile. If it's a nautical mile, speed is in knots. If it's a statute mile, speed is in statute miles per hour. Just divide seconds required for the run into 3,600 in either case.

Obviously, if a mile is 3,600 seconds long, then a half-mile is 1,800 seconds—and so on. Unhappily, waterway markers aren't located at such convenient distances.

But what if you had a special ruler measuring miles in terms of seconds? If two convenient markers on a straight stretch of waterway measured, say, 1,350 seconds apart then you've already done half the complex math going into normal, conventional methods.

Just time your run in seconds between those two mark-

ers, divide the seconds into 1,350, and obtain speed.

Well, there is just such a ruler. It's the three-sided draftsman's scale you can find in some dime stores and in almost all office supply stores.

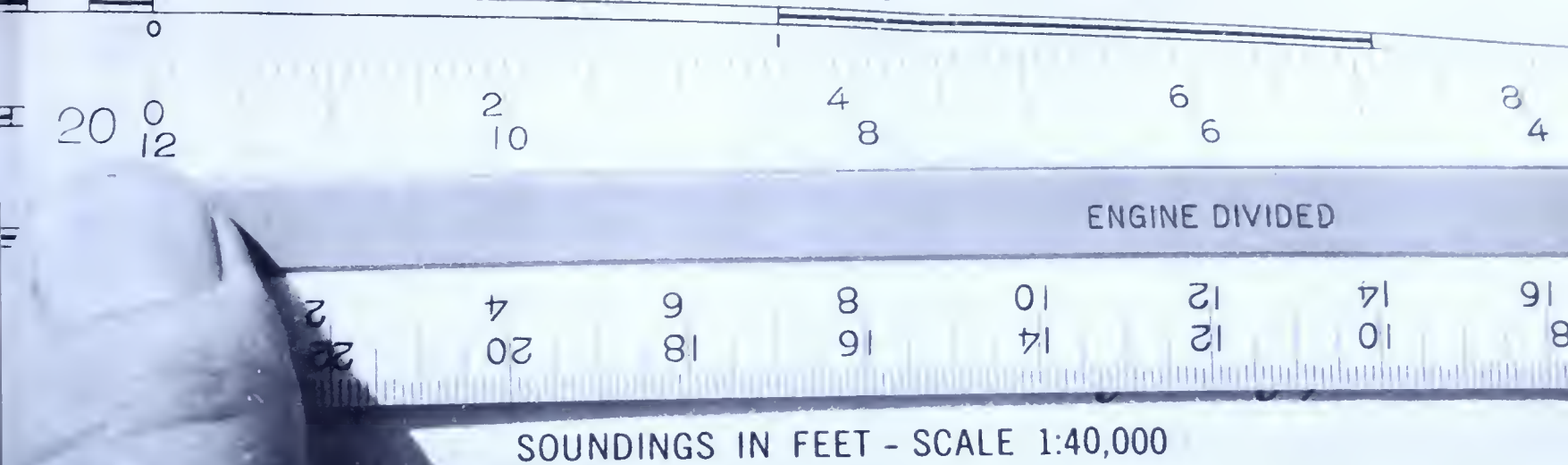
The 20 unit-per-inch scale matches the 1:40,000 scale of waterway charts. The nautical mile on the chart is 3.6 units long on this ruler. Allow 100 seconds per ruler increment, and you measure a mile at 3,600 seconds!

You must interpolate by eye in between, but you can use the 40 scale on the ruler to help you, and errors shouldn't exceed more than ten seconds. For a boat in the 30-knot speed range, measured over a half-mile, a ten second error means a mistake in computing speed of less than two-tenths of a knot.

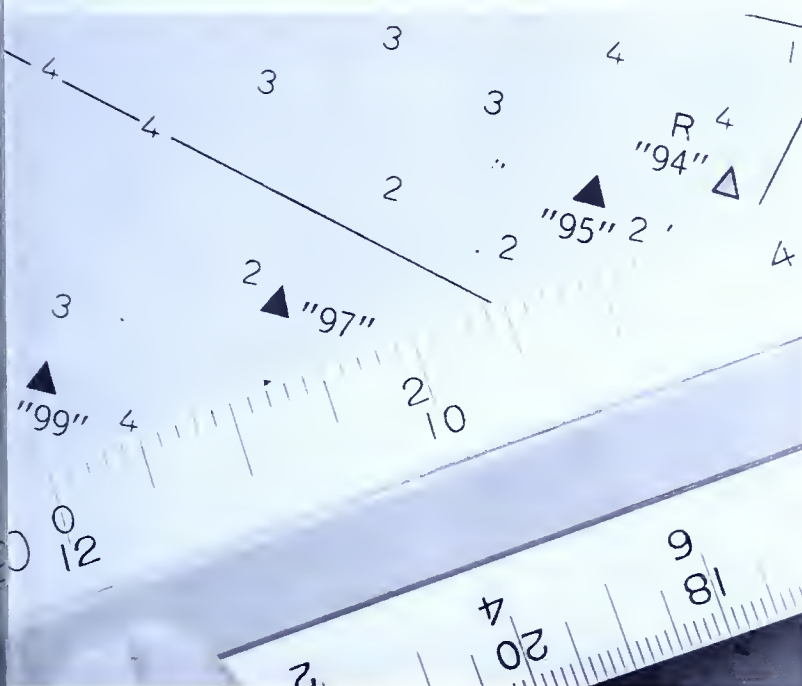
Use this ruler, on 1:40,000 scale waterway charts, to measure the distance—in terms of seconds—between any two handy markers. Make them at least a quarter-mile apart. Run both ways, compute speeds, average speeds (not time) to allow for wind and current effects.

It's an easy way to make up a tachometer table of speeds at various rpm. A fast method too.

Measuring distances in terms of time is such a simple, useful gimmick, that maybe the Geodetic Survey will print a time-distance scale on their waterway charts some-



A draftsman's ruler measures 3,600 second nautical mile on the 1:40,000 scale chart exactly as shown in photo above.



With the twenty scale on the draftsman's ruler, it's 1,300 seconds from marker "99" to marker "97," or from marker "99" to marker "95" it's about 3,000 seconds.



A slide rule quickly masters tough mathematical problems when properly used. Slide 150 under 3,600 and find answer above B scale one.

day. If they did, you wouldn't even have to buy the ruler. All you would need would be the chart, and a pair of dividers to measure distances in terms of seconds.

Now this novel and simple system for timing a boat's speed between waterway markers has taken most of the work out of it, except for the problem in long division that is involved in the computation. This mild brain-strain can also be simplified by buying a mathematical aid where you bought the draftsman's ruler.

It's a cheap, plastic slide rule. And if you start with the simple kind, it needn't be frightening. What's more, the small ones fit nicely in a pocket as do the smaller rulers.

The slide rules come with an instruction sheet and are easily mastered, but these few words may be helpful.

Start using the A and B scales at the top of the ruler. After you've acquired some experience, you can obtain better accuracy with the C and D scales—but they take a little juggling.

The trick to using a slide rule is to just remember that you mentally insert zeroes and decimal points to suit your

problem. Thus, 3.6 can be 36 or .36, and just as easily can be 360 or 3,600.

To simplify the use of a slide rule in determining speeds, think of the A scale as the measured distance in terms of seconds or time—and one mile is 3,600 seconds "long."

If you time your run over a measured mile, use that figure on the scale. Let's say it takes you 150 seconds to run a nautical mile.

Put the 1.5 on the B scale (which means 150; under the 3.6 on the A scale (which means 3,600) and read your speed in knots above the nearest "1" on the B scale.

The illustration makes it clear. The problem is written above the "smart stick". Divide 150 into 3,600 by following the directions above, and you can find the answer—24 knots—above the B scale No. 1, which is very close to the left-hand thumb in the photo. Practice makes perfect. You interpolate by eye for numbers between the rule increments, but accuracy won't be seriously affected.

With a draftsman's ruler, as explained, and a cheap slide rule, you can easily compute boat speed at any rpm.

WINTER ON THE

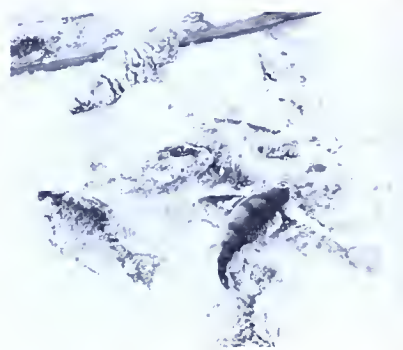


ICE —

photos by TOM EGGLES



A visit to any ice covered Pennsylvania lake within the next few weeks should turn up hundreds of scenes like these—fishermen hard at fun—ice fishing. You can isolate yourself by heading off to some far off corner of the lake or you can spend the day socializing with others who enjoy “membership” in the “club.” Just show up every weekend on some popular lake. No amount of words or pictures can tell you what it’s really like. There’s only one way to find out. Try it and become a part of the picture!



PENNSYLVANIA'S MOST FAMOUS FISHERMAN



fishing records were broken with the advent of better equipment. Not only did Zane Grey introduce new methods of fishing but he taught a true, pure spirit of fishing by releasing a large percentage of the fish he caught.

Today, as the 100th anniversary of his birth nears, there is a marked resurgence of interest in Zane Grey. A Zane Grey postage stamp is on the agenda for January, 1972, and in October, 1971, the Marlin Firearm Company is releasing "The Zane Grey Century," a beautiful 30-30 calibre rifle commemorating the anniversary. A fanzine called "The Zane Grey Collector" is published quarterly, and the "Zane Grey Western Magazine" is published bi-monthly. Three different publishers reprint his novels regularly and ground has been broken near the city of his birth, Zanesville, Ohio, for the Zane Grey-National Road Museum.

Although Zane Grey traveled to many strange and exotic places he never forgot the land and the home where he struggled so hard for his place in the sun. He wrote:

"The Delaware wound through a picturesque mountain region, where forests abounded with game and the streams with fish. Here I had the first happy times since childhood; and I had them despite the lack of money or the encouragement of recognition."

He was making plans to return to Lackawaxen when death overtook him.

Today his remains rest beside his beloved Dolly on the shore of the Delaware River. The river murmurs softly by and the forest covered hills he loved look down on the simple headstone marking the graves. The unquenchable memory remains.

SAFE (?) BOATING

in retrospect

ERIE COUNTY FATALITY

On 7 August, 1971, at Gull Point on Thompson Bay off Presque Isle, about ten people were engaged in a party aboard a 25 foot cabin cruiser. The gaiety was interrupted when one of the men decided to go for a swim. On that note, he dove from the boat into the water. The others saw him lying down in the water and thought it was a joke. The only joke was the one foot depth of the water he dove into! The victim was pronounced dead on 13, August, 1971. Cause of Death: cervical spine and brain damage.

BUTLER COUNTY FATALITY

On 19 August, 1971, three men were proceeding south on Slippery Rock Creek in a canoe. The victim, sitting amidship, attempted to change positions in the canoe. The craft capsized and all three men were thrown overboard. The victim fell in toward center stream with the other

two falling toward shore. The thrashing victim went under before he could be reached by his friends. Later investigation revealed the victim had engaged in heavy drinking that day and that there were no Personal Flotation Devices in the canoe. This was the THIRTEENTH FATALITY on a craft *not required* to carry "PFD's" by law this year!

DELAWARE COUNTY FATALITY

Flooding of Chester Creek on 13 September, 1971 set the stage for this tragic boating accident which claimed the lives of four people. A grossly overloaded (nine persons on board) and unequipped, 16 foot aluminum, Fire Company Rescue Craft was carried out of control by a strong current while proceeding down one of the flooded streets in the area. The boat collided with a Traffic Light Pole which caused the eventual flooding and capsizing of the craft. Two passengers in this craft drowned as a result of this boating fiasco, and two would-be rescuers from shore also met death while attempting to aid those in the distressed boat. Only the deaths of the two passengers in the boat are considered as Boating Fatality Statistics but the other two people are also statistics *as a result of unsafe boating practices . . . DEAD STATISTICS!*

The Invincible "13"

by Ken Corl, Chief, Trout Production

Photos—Stan Paulakovich

The number 13 in most respects is a superstitious figure, destined to bring ill fortune to those related to it. We're going to turn the tables on this myth and prove otherwise.

The Reynoldsdale hatchery lies at the base of one of many rolling hills in East St. Clair Township in Bedford County. The springs which supply this hatchery do not vary. They flow from the earth with 13 hundred gallons per minute of clear, cool 50 degree water of high quality. Their flow is constant in both temperature and volume summer and winter. This makes Reynoldsdale one of the most efficient fish producing stations in the world.

Many moons have come and gone since Reynoldsdale hatchery was established. Built in 1928 as a fingerling station it has since grown in size and stature. The ponds and raceways were carved out of a beautiful green lawn. These holding areas are capable of rearing thousands of adult Trout. As a matter of fact, for the past decade, this station has produced in excess of 60 tons of Trout per year. 1971 was a banner year for the complement of 13 employees. Over 70 tons of Brook, Brown, Rainbow and Pal-amino Trout departed the hatchery last season.

Behind the scenes lies a great deal of pride and perseverance among these 13 employees. The combined years of service of all of these men average out to 25.2 years of experience. To operate this hatchery much recirculation and re-aeration of the water is necessary. Under such conditions a large number of pumps are in use. Mechanical failure is an ever-present threat, but should it develop, any one of these employees would be willing to come out and assist a fellow worker on a moments notice. Cooperation is a noticeable attribute of these men.

Three years ago with the able assistance of their super-



All that's missing here is an old pot-bellied stove in this lunch break scene.

intendent, Warren Hammer this crew built a lighthouse. In fish culture, a lighthouse is a covered pond or series of tanks where brood trout are held. Lights inside are controlled electronically and by gradually lengthening and then gradually shortening the amount of light inside these lighthouses, the Trout are induced to spawn in 8 months rather than the normal 12 months. This means we have an extra 4 months to raise these fish before they are stocked.

This in reality nets the hatchery another crop of Trout and provides larger fish for Pennsylvania anglers. The crew at Reynoldsdale take and fertilize about 3,000,000 Trout eggs annually. These eggs provide the hatchery with their growing stock. An additional 375,000 fry are shipped each year to our many co-operative nurseries throughout the state. Tens of thousands of fingerlings are also shipped to other state hatcheries to be raised to stockable sizes.

If you have never been there, the Pennsylvania Fish Commission invites you to enjoy a visit to this spacious, well kept station. Visiting hours are from 8:00 A.M. to 5:00 P.M. daily. While you are there, feel free to ask any questions about the operation of any member of "The Invincible Thirteen". You'll soon see that like Old Man River . . . "they just keep rolling along."



Superintendent Warren Hammer becomes "one of the boys" at egg-taking time.



Workers seine trout for transfer to other holding areas.

FLY TYING—

Chauncey L. Lively

THE GIANT STONEFLY



On some of the large trout streams in the West the major dry-fly excitement is caused by the so-called 'Salmon Fly' or 'Willow Fly' hatches. These are flights of enormous stoneflies, some of which measure two inches or more in length, and when they are on the water some of the largest trout in the stream surface-feed with a fury seldom seen when mayflies are on the water.

The big stoneflies belong to the genus *Pteronareys* and although they are best known to fishermen in the West they are also present on many of our eastern streams. In the East their common habitat is in slower water than that commonly associated with the flat stonefly nymphs of *Perla* and *Aeroneuria*, both of which prefer fast, well-aerated water. *Pteronareys* nymphs like the cold, clear headwaters of upland spring brooks and their principal diet is decaying vegetation. They can often be found on the upstream side of submerged logs, where silt and debris collect. The nymphs are very dark in coloration and robust, lacking the flatness so characteristic of the riffle-dwelling nymphs. They are often called 'Curlers' because of their habit of rolling up into a ball when disturbed.

Like most stoneflies, the adults of *Pteronareys* offer scant opportunity for dry fly fishing on emergence. But the return of the females to lay their eggs on the water is quite another matter for their method of ovipositing creates a disturbance too great to be overlooked by large trout. The big females

release their eggs while swimming across and upstream, wildly fluttering their outstretched wings and leaving a V-wake behind. The response by a big trout to such a performance is often a crashing, shattering rise, the likes of which can leave the by-stander in a trembling state of anticipation.

From an angling standpoint the presence of flies as large as *Pteronareys* can only be significant when large trout are present in the stream and are willing to feed upon the big insects. This would appear to negate the sporting possibilities of these flies on the little headwater mountain brooks, where small brook trout are the principal occupants. Fortunately, however, *Pteronareys* also appears in good numbers on some of our large, spring-fed streams which contain big brown trout. Penn's Creek gets a good showing of the giant stoneflies around mid-June and knowledgeable anglers are well-acquainted with them. They were once plentiful on the East Branch of the Delaware River in New York but it is reported that ecological changes have brought about their near-extinction on that watershed.

Unlike its western cousins, whose egg-laying flights occur during daylight hours, the *Pteronareys* of the East is mainly nocturnal. There are occasional exceptions, when it appears in late afternoon on dark, overcast days, but most of the fishing to the giant stoneflies is the domain of the night fishermen, on streams where night fishing is permitted.

The Egg-Laying Stonefly pattern we are tying this month is a dry fly made almost entirely of hollow deer body hair. It is designed for maximum flotation, necessarily so because it must be agitated to simulate the fluttering commotion made by the ovipositing females. Although stoneflies are four-winged insects the two flared hair wings of the artificial are sufficient to simulate the spread-wing posture of the natural fly on the water. As a night fly the pattern should be tied in sizes #6 to #10, on long shank hooks. Mustad's #94832, with its 2x long shank and 2x fine wire, is a good hook for this purpose. And as in most night fishing, the leader should be stouter than those normally used in daylight for the rise of a large trout is often much more forceful under cover of darkness.

In addition to fishing the Egg-Laying Stonefly when the giant *Pteronareys* is on the water, there is a secondary use of the pattern which permits daytime fishing. Late in the regular trout season and on warm days during the extended fall season the big, fully matured grasshoppers are active. When they get on the water they often flail the surface with their wings and float with wings extended. Then a size #10 Egg-Laying Stonefly becomes a 'hopper imitation' and with it I have caught some fine autumn trout. Meadow streams are particularly good prospects for this kind of fishing but even the mountain trout of the woodland streams seem to know about grasshoppers by season's end.

1



TO TIE AN EGG LAYING STONEFLY

1. Clamp a long shank, fine wire hook in vise. (Size #10 shown.) Tie-in size A orange Nymo thread behind eye and spiral thread to bend, then spiral thread forward and half-hitch behind eye.

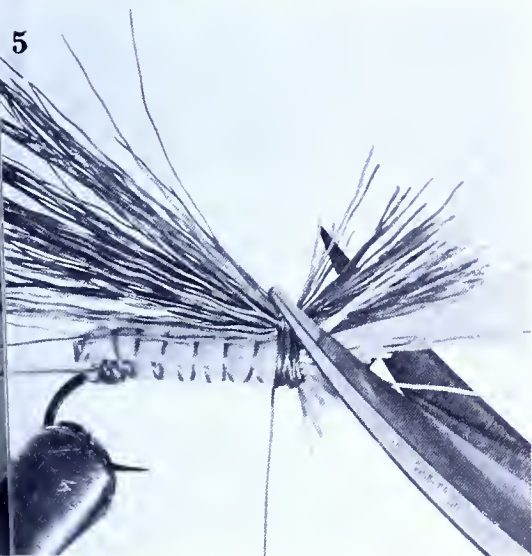
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2. Cut a bunch of yellow-dyed deer body hair from the hide (bunch should be about 1/4" wide when flattened) and comb out the short hairs and fuzz. Hold hair lengthwise on top of hook with butts extending over eye. Make two tight turns of thread around hair and hook behind eye and spiral thread in spaced turns to bend of hook. Half-hitch.

3. For tails select two short quill fibres from a gray mallard primary and bind to sides with two turns. Then fold quill butts back and wind over with two turns to lock tails in place. Trim waste quill butts as shown.

5



4. Pull the unbound hair forward over the back of the sub-body and spiral thread forward in spaced turns. Half-hitch in position shown.

5. For wings cut a 1/4" bunch of natural brown deer body hair and bind behind head over body. Half-hitch. Wings should be 1 1/2 times the length of hook. Rough-trim the head to get the long hair butts out of the way.

6. Separate the hair wing into two halves and position at 45 degree angles by criss-crossing thread in figure 8 turns. Then pass thread under head and whip-finish behind eye, as shown. Cut off waste thread and lacquer finish windings.

7. Place a drop of lacquer at the base of each wing. When nearly dry, squeeze with tweezers to flatten wings. Finally, finish-trim the head.

8. Finished Egg-Laying Stonefly.

9. Pteronarcys, the giant stonefly.

2



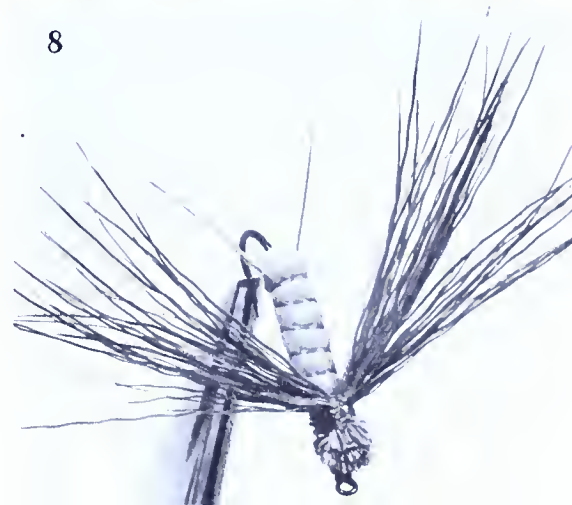
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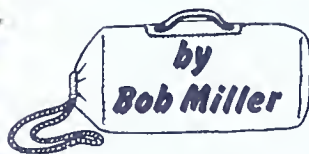


7





THE SEA BAG



A column of news devoted to the activities of boat clubs, flotillas, power squadrons and items of interest to Pennsylvania's boaters.

THERE'S A WAY—

"Where there's a will, there's a way."

There are times when pleasure boat owners, in an emergency, are forced to probe their ingenuity and create a makeshift arrangement to solve the problem at hand and, quite often, the net results are exactly what they are looking for.

For example I ran into a problem just last summer, involving the lack of a small metal fastener for the wing windows on my runabout, and because the solution seemed so simple I thought it worthwhile passing along to others who just might find themselves in a similar predicament.

The wing windows were purchased a few years ago from a nationally known accessory firm and came complete with two plexiglass windows and cast metal fasteners, two for each window—top and bottom.

However, for some reason, the window on the starboard side of the boat would always work loose but, fortunately for me, would fall inside the boat. I never lost a window but last summer one of the fasteners fell overboard and was lost in several feet of water.

First I tried several dealers to find out if they carried these items in stock but, as luck would have it, the firm discontinued the wing window idea in favor of an adjustable vent in the center of the windshield and no one had what I was looking for.

My first thought was to carve a fastener out of a small block of hard wood—roughly one by one inch with a quarter of an inch slot on one side—and I succeeded. However, even though it was painted to protect it from the weather, within one week of exposure to the elements it split in half.

After this misadventure in manufac-

turing I considered using a small block of aluminum and filing it down to size but during my search for suitable material I found in the basement two pieces of aluminum cap molding which apparently had been purchased years ago as edging for holding a counter top in place.

This was my lucky day. A cross section of the material resembled a "J" with the long side about one inch long, the short side about one quarter of an inch, and in between a slot just wide enough to hold the plexiglass.

All I had to do was cut it up into one inch long pieces, using a fine hack saw, drill an eighth of an inch hole through the base and I was back in business. Now with two six foot pieces of molding on hand I've enough wing fasteners to last a lifetime.



Two small pieces of aluminum molding, cut to approximately one inch long and drilled down the center, serve as fasteners to hold this wing window in place.

SOME INTERESTING QUESTIONS

(Q) Why is the helmsman's seat normally on the starboard side?

(A) Because it places the operator in the most favorable position for observing the approach of other craft on his forward starboard quarter.

Some of our present boating rules go back far into history. For example it was a custom among the Vikings some 1,000 years ago to tie up to docks and quays with the left side of their ships shoreward.

That's how the left side of the ship came to be called the "port" side and, because of this custom, the steering rudders of their double ended craft were rigged on the right side so they would not be in danger of brushing against a quay and becoming damaged.

On the other hand today's modern term for the right side of the boat, "starboard," comes from the Viking word for "steering board."

(Q) How many sailboat classes can be found on the waters of the Commonwealth?

(A) There's quite a few, more than I've ever realized, according to the catalog of U.S. sailboats as provided by the American Sailing Council.

The catalog lists the Olympic, Keelboat, Centerboard, Multihull and Off-shore Classes and one will find, on the waters of Pennsylvania, craft representing each of the four former classes and, no doubt, on Lake Erie some of the latter although none are indicated as being in use in this area.

Found on Pennsylvania waters and their lengths are:

Olympic—Dragon, 29' 2"; Finn, 14' 9"; Flying Dutchman, 19' 10"; Star, 22' 7½"; Tempest, 21' 11½".

Keelboat—Bluenose, 23' 6"; Bull's Eye, 15' 8½"; Crescent, 24'; Ensign, 22' 6"; International 110, 24'; International 210, 29' 9½"; International 21, 21'; Luders 16, 26' 4"; Mercury, 18'; Rainbow, 24' 2"; Rhodes 19, 19½"; Shields, 30' 2½"; Victory, 21'.

Centerboard—Albacore, 15'; Amflite 14, 13' 10"; Blue Jay, 13' 6"; Buckeye, 12' 8"; Butterfly, 12'; Cape Dory, 10' 6"; Caprice, 14' 8"; Columbia 21, 21' 8"; Comet, 16'; Cottontail, 15' 10"; Cygnus, 20'; Day Sailer, 16' 9"; Duster, 13' 9"; Dyer Dhow 9, 9'; Dyer

TIME TO "BRUSH UP"

even the best boater can get "rusty" in the off-season

/ ON BOATING REGULATIONS

Ice fishing leaves you cold, you don't tie flies, make your own plugs, jigs or spinners—you're a warm weather fancier and proud of it! So just what is there to do this time of year? For openers, you might check the boat's registration numbers . . . remember how a few of the "stick-ons" began to "peel-off" last year? It's a good time to go over the boat, stem to stern, checking registration numbers, loose wires to the running lights, and all those little things that began to come apart last Labor Day. It's funny how unimportant they seemed when the boat was being put up for the winter—but attention to them *now* can save a smart boater considerable embarrassment later.

So you're two steps ahead of me . . . you've taken care of all that, right? Good! Now, how about we get down to the nitty-gritty and do a little homework? When was the last time you looked over a "WS-250"? You don't remember, do you? In fact, you're not sure your wife even bought one on the last grocery shopping spree! She didn't! It's a copy of **PENNSYLVANIA PLEASURE BOATING REQUIREMENTS**.

Ignorance of the law is usually the reason for breaking one of boating's rules of the road or coming up short during an inspection of required safety equipment. Mistakes are made by

boaters all the time . . . and not because of any willful attempt to fool the boarding officer, but merely the result of a misunderstanding of some of the important boating regulations, each of which has been promulgated for but one reason: BOATING SAFETY.

Just for kicks, dust off your copy of the boating regs and give yourself a short quiz. You're not going anywhere in any hurry just now so take your time and browse through—read each section and be truthful, ask yourself, "Did I really know that?" In case you've mislaid your copy, write us; I believe we've got an extra copy lying around somewhere.

The WS-250 for 1972 will see some changes; one of the most important—at least in areas where it will apply—will be the new "200 Foot Rule". In brief, vessels with engines in excess of 6 horsepower will not be permitted on any stream which measures less than 200 feet across for the greater part of its course. Also prohibited are air propeller-driven boats and those designed for racing, i.e. hydroplanes, jet boats, etc. ATV's (all-terrain vehicles) air-cushion effect vehicles, or similar unique designs are likewise prohibited.

There are two *exceptions* to this regulation: First, the 200 Foot Rule does not apply on those waters where

the Fish Commission has promulgated special regulations for zoned areas where larger engines are permitted *under controlled conditions*.

Secondly, (and this will affect many boaters) **IT DOES NOT APPLY** where boats of greater horsepower are used legally on larger bodies of water but **MUST USE STREAMS LESS THAN 200 FEET ACROSS PROCEEDING TO AND FROM THEIR PERMANENT MOORINGS**; provided that such boats proceed in these waters in accordance with Reg. 4.10A.7 (i.e., "at a slow minimum height swell speed".)

Suppose you have been a regular user of such a waterway? Your motor exceeds 6 HP by far and the stream is a mere 180 feet across—may you continue to use it as you had in the past? **NOT EXACTLY!** Originally, it had been decided to allow such owners a reasonable time in which to dispose of the larger motors. This was understandably vague and to pin it down, a date of 1 April, 1975 has been set, "beyond which date larger engines will not be permitted to operate under any circumstance." *Meanwhile*, their continued use will be permitted at slow, minimum height swell speed *and this provision will be strictly enforced!* This will eliminate water skiing on these waters—unless special regulations have been promulgated.

continued from previous page

THE SEA BAG

Dink, 10'; El Toro, 7' 11"; Falcon, 15' 8"; Fireball, 16' 2"; Firefly, 12'; Flying Fish, 14'; Flying Junior, 13' 3"; Flying Scot, 19'; Flying Tern, 14'.

Goldfish, 13' 9"; Highlander, 20'; Interlake, 18'; International 14, 14'; Jet 14, 14'; Jollyboat, 18'; Kestrel, 15' 7"; Kahinoor, 15' 3"; Leader, 14'; Lightning, 19'; LS 13, 13'; LS 16, 16'; M-20, 20'; Mariner, 19' 2"; Mac Dinghy, 10' 10"; Mirror Dinghy, 10' 10"; Mobyjack, 17'; National One-Design, 17'; Nipper, 12'; OK Dinghy 13' 1½";

Omega, 13' 7"; Optimist Pram, 8'; Peanut, 9' 6"; Penguin, 11' 6"; Pintail, 14'; Super Porpoise, 13' 10"; Rascal, 14'; Raven, 24' 2"; Rebel, 16'; Rhodes Bantam, 14'.

S-12, 12'; Sailfish, 13' 7"; San Francisco Pelican, 12' 2½"; Scorpion, 13' 9"; C Scow, 20'; Cub Scow, 12' 3"; D Scow, 20'; E Scow, 28'; M Scow, 16'; W Scow, 14'; Seagull, 14' 6"; Seven/Eleven, 7' 11"; Signet, 12' 5"; Skipjack, 14' 7"; Skylark, 14' 2"; Snipe, 15' 6"; Spindrift, 13' 4"; Sprite, 10' 2"; Squall, 9' 4"; Starfish, 13' 8"; Stingray, 13' 2"; Sunfish, 13' 10"; Sweet Sixteen, 16'; Tech 11, 12' 6"; Tern, 12'; Thistle, 17'; Thunderbird

Pram, 7' 7"; Wayfarer, 15' 10"; Wid-geon, 12' 4"; Windmill, 15' 6"; Wood Pussy, 13' 6"; X Boat, 16'; Y-Flyer, 18'.

Multihull—Aqua Cat, 12' 2"; B Lion, 20'; Cal Cat, 12' 10"; Hobie Cat 14, 14'; Phoenix, 18'; Shark, 20'; Tiger Cat, 17'; Tornado, 20'; and Trikini, 13'.

And that's a lot of sailboat classes!

Just in case I haven't mentioned it before, there are two more sports shows in the offing—the Philadelphia Sport, Camping, Vacation and Travel Show, Feb. 5-13; and the 13th annual Allentown Sports, Vacation, Boat and Travel Show, Feb. 12-19.



BEST EATING

■ The Kokanec at Upperwoods Pond, drew interest last fall. They hit well and when I asked a party who drove in from western Pennsylvania over 300 miles away why they liked Kokanee fishing so well their immediate answer was "They are the best eating of any fish."

—Waterways Patrolman **H. F. REYNOLDS**
(Wayne County)

HEAD SHAKER

■ Last summer as I patrolled the Delaware River at Upper Black Eddy, a boat with four occupants attracted my attention. One of its occupants was bow riding. I met them at a dock and explained to them the dangers of such operation and proceeded to fill out a boarding form. I asked the operator if he had sufficient life saving devices, Coast Guard approved, on board for himself, his wife and their two young children. He said "Sure, I got 'em" and crawled under the bow tarp to get them. After a minute or so he crawled out and told me he had only one and must have left the others at home. I asked to check the one he had and he crawled back un-

der the bow tarp and returned with his only life saving device . . . an empty two gallon can. His anchor was an old rusty rotary mower housing minus the handle. So if you occasionally see a waterways patrolman returning to his car, all the while shaking his head, perhaps it will be because he met some "boater" like this!

—Waterways Patrolman **JAY B. JOHNSTON**
(Bucks County)

NO BARGAIN

■ While in a grocery store recently a fisherman came up to me and showed me a package of rainbow trout which came from Japan. He told me he had been stationed there during the war and he had never seen any trout streams. I told him that perhaps they were raising them in silos like our people at Benner Springs. Figuring the price of these fish—which I am certain was below the average weight of the trout I stocked in my district last year—times our daily creel limit I came up with a figure of \$7.92. So anyone who caught just one limit of trout in my district got a bonus for the price he paid for a resident license. These imports weren't any bargain at all when compared with PFC fish!

—Waterways Patrolman
STEPHEN A. SHABBICK (Wyoming County)

TIGHT FIT

■ While on foot patrol along a small mountain stream with S. W. P. Fred Geist, we had occasion to observe an unusual incident. In a shallow pool, we surprised several trout, which, when they noticed our presence, scattered in all directions but one of the trout seemed to be in a bit of trouble. He splashed around a bit, then lay belly up in the water as if exhausted. Reaching down to pick him up, I found the cause of his distress. He had wedged his body into a hollow tube about half the length of his body, and

was stuck fairly tight. The tube was a natural one made of a piece of curled birch bark which had fallen into the pool. Mr. Trout had apparently swam into it seeking cover but hadn't expected such a tight fit.

—Waterways Patrolman **FREDERICK MUSSEL**
(Lehigh County)

"OBSERVER" BARKS

■ During the boating season of 1971 the new rule came into effect that requires that a competent observer on board while towing a water skier. On the Shenango Reservoir in Mercer County, we have a unique observer. This observer has four legs and barks. When the skier is on the port side of the boat, the dog will perch in front legs on the port side and bark all the time the skier is on the port side. When the skier crosses over to the starboard side, the dog will do the same thing on that side. When the skier is in the middle the dog will perch himself on top of the motor well and bark at the skier. What happens when the skier falls off? You guessed it! The dog grabs the driver by the arm and pulls it.

—Waterways Patrolman **JAMES E. ANSELL**
(Mercer/Lawrence Counties)

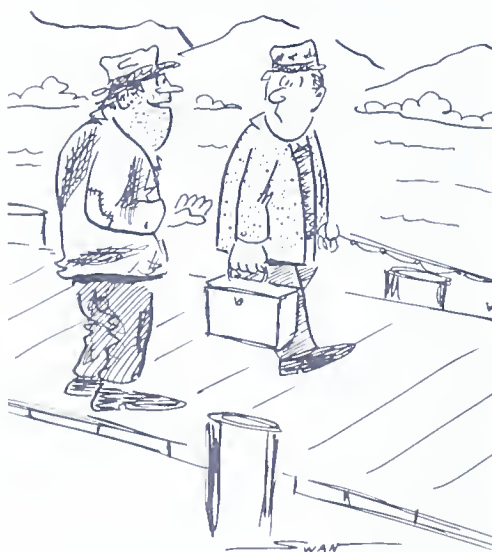
"PRETEND FLIES"

■ While working on a case in the District Justice Office, one of the secretaries that is married to the Mayor of the City of Mercer passed on this little word to me about her husband's fishing. It seems that he likes to fish the fish for fun area with those "Pretend Flies."

—Waterways Patrolman **JAMES E. ANSELL**
(Mercer & Lawrence Counties)

ONE OF THOSE DAYS

■ On one Saturday in June Special Waterways Patrolman, Jack Moore and I were patrolling the Allegheny River. One fisherman, when asked if he was having any luck, replied, "I caught two red snappers, but they were too small." Another gentleman invited us into his camp to identify "some vicious little minnows" that his boys had put into the family aquarium. He had about twenty smallmouth bass, which had eaten all the tropical fish in the tank. Later, we checked a motorboat, on which all the numbers were placed upside down. The boat



"COULD YOU SPARE \$50 FOR A NEW SPINNING REEL?"

owner had been sitting in the boat, when he put on the registration numbers and, naturally, when he bent over the side, and read the instructions, on went the numbers in a stand on your head fashion. Guess it was just "one of those days."

—*Waterways Patrolman* **GEORGE R. JONES**
(Warren County)

MINNOW FOOD?

■ Recently I had a phone call that was very urgent, a matter of life and death so to speak.

The party at the other end of the line stated that her husband had dumped a bucket of left-over minnows from fishing last fall into their swimming pool, and that there now were baby minnows in the pool. She wanted to know what to feed the baby minnows?

—*Waterways Patrolman* **JAMES R. SMITH**
(Allegheny Co.)

UNEXPECTED

■ Earlier this month after having good success smallmouth bass fishing in Brandywine Creek, Ridley Creek State Park Officer Tom Cosgrove and a friend returned to the stream to try again. While floating downstream in a canoe and fishing with spinners his friend had a good hit but couldn't move the object. At first he thought he had caught the bottom or a stump, but after a moment he could feel movement on the line. Both thought he had hooked a giant musky. After a few minutes of maneuvering the canoe and fighting the line they sighted the hooked "musky." It was a large snapping turtle and, surprisingly, it had taken the spinner and was hooked in the mouth. This is the first time I had ever heard of catching a snapper in this manner. That just goes to prove that fishing, even in old familiar waters, always holds the possibility of the unexpected to the angler!

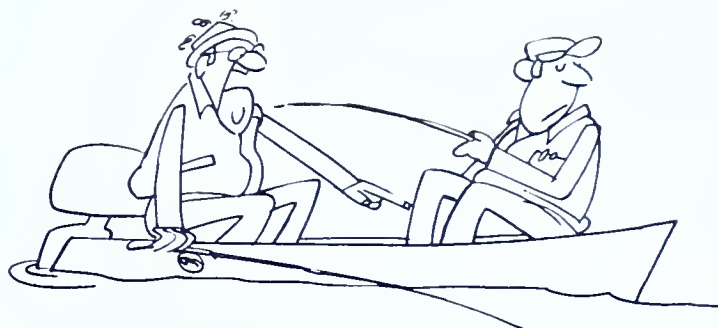
—*Waterways Patrolman* **LARRY R. BAKER**
(Delaware County)

INVESTIGATIVE PLEASURE

■ During the past several years as a Special Waterways Patrolman Daniel W. Bullock has had the distinct displeasure of investigating several fish kills and on June 19 he thought he had another one to add to the list. A mishap with a gas truck next to Trout Run near Valley Forge resulted

in the loss of 2,000 gallons of gas into the gutter very near the stream. When he heard the report of the accident and the fact the local fire company had been required to hose down the area, he felt certain a fish kill would result. Imagine his delight when he found several very lively minnows scurrying around right at the mouth of the road ditch leading from the accident site. Further investigation showed the reason. The firemen had constructed a hasty dam in the ditch and trapped all of the gas and wash-down water which was absorbed harmlessly by the soil and never reached the creek. The firemen responsible were from the Berwyn Fire Company. Not only did these men take the trouble of digging this impromptu dam, but they did so with considerable danger to themselves. Who wants to spend more time than is absolutely necessary in the company of a leaky gasoline tanker that could explode any minute? As Berwyn Fire Chief Frank Kelly said, "We have a lot of fishermen among our men and they just couldn't let that stuff get into the creek." Their fine example should encourage all who love the outdoors, and we are all in their debt. Hats off to the men of the Berwyn Fire Company!

—*Waterways Patrolman* **R. A. BEDNARCHIK**
(Chester County)



"LOOK AT THE SIZE OF THAT LUNKER!"

PUDDLE FISHING?

An interesting story was related to me by a Mr. Harold Fries, of Meadow Brook Terrace, Bedford, Pa.

Some time ago while visiting the Valley Inn in Bedford Valley, Bedford County, a fisherman from Cumberland, Maryland, spending some time at the Inn inquired directions to the Koon Lake to fish. This gentleman was given directions, told to take the first hard road to his right going north on Route 220, keep on this road until he noticed water to his right, this would be the Koon Lake, told he could not miss it. When the fisherman left the Inn it was after dark. He found the correct road and within a short distance noticed water. Parked his car, carried his equipment along with a chair down to the edge of the water, set up his equipment, consisting of rods that were baited with very good fishing worms, then sat down on his comfortable chair, waiting for a bite. But the fisherman fell fast asleep. When he woke up it was daylight and to his surprise he was fishing in a puddle caused by a rain in a farmers pasture field. He was still over one mile from the lake.

—*Waterways Patrolman*
WILLIAM E. McILNAY (Bedford County)

"As the twig is bent—"

Our hats are off to the Schuylkill County Sportsmen's Association!

Watercraft Safety Coordinator Sowers relates this pleasant tale of—

A Day at Camp Pine Grove

by Paul Sowers



Watercraft Safety Coordinator Sowers teaches youngster proper method of entering and leaving canoe.

Last January (1971), Norman Thornburg, Secretary of the Schuylkill County Sportsmen's Association, contacted Supervisor Miles Witt, requesting the Pennsylvania Fish Commission join the Pennsylvania Game Commission, Department of Environmental Resources and a number of other state and local agencies for scheduled programs at the first Schuylkill County Junior Conservation Camp to be held in August.

Supervisor Witt accepted the invitation and he, Assistant Frank Kulikosky, and I, submitted a schedule to Mr. Thornburg for Friday, August 13, 1971.



From left to right, top row: James Hill, Staff; Ed Wenez, Staff; T. Shaffer, R. Kline, Norman Thornburg, Staff; R. Feryo, J. Kubilesky, Mike Roman, Staff; and John Lauch, Staff.
Second row: D. Krause, D. Berdanier, G. Kanezo, J. Clark, R. Gately, D. Kelly, A. Spotts and E. Reinert.
Front row: E. Milot, J. Wagner, T. Foose, J. Moyer, W. Zeigenfuse, R. Smith and G. Helman. Not pictured, B. Connors and G. Laubach.



David Berdanier finds personal flotation device does not impede his paddling.



Dave and pal Robert Gately, Jr. learn proper paddling methods from Sowers.

Miles, Frank, and I arrived at Camp Pine Grove on the morning of August 13. We were joined by Jim Hazen, and Jack Stepanski, Waterways Patrolman for Schuylkill and Dauphin counties respectively.

We were greeted by Mike Roman and Johnny Lauch, two members of the Camp Staff, and escorted to the mess hall where we were met by Special Waterways Patrolman Jimmy Hill. Jimmy introduced us to Milton Becker and Jack Murray. These men were praised for the terrific jobs they were doing in the kitchen. Anyone sitting in on one of Mr. Becker's meals would have to agree that he's one of the best cooks in Schuylkill County. The first order of business was hot coffee, along with a briefing by Mike, John and Jimmy Hill. Our day started at 8:00 a.m. when twenty-one boys filed into the mess hall and took their seats. Supervisor Witt introduced the Fish Commission personnel and explained the organization and functions of the Commission. He finished with a question and answer period to which the entire group responded with enthusiasm.

The group broke up and reorganized under a hemlock grove along the edge of a lake about 700 yards below camp. Jim Hazen took charge of the program at this point and assisted by Stepanski gave a fine presentation on the

fundamentals of fishing and a casting demonstration. I stood by, waiting for the sun to get as hot as blazes because I had a safe boating and water safety presentation scheduled on the lake. Eventually Special Hill and I presented a life saving device and canoe demonstration and nearly turned blue during the presentation. After lunch, we regrouped along a scenic little stream called Rock Run, a tributary to Swatara Creek and Frank Kulikosky took charge of the boys, giving them a briefing on water pollution and stream protection. The boys were then divided into three groups and participated in an actual stream survey. One group gathered biological data, another gathered chemical data, and the third group compiled physical characteristics. Each group worked under the guidance of Commission personnel and changed points each hour. The afternoon was high-lighted with an electro fishing demonstration which showed the boys the type of fish-life present in the stream. After this demonstration, we returned to the mess hall for the evening meal and a recap of the day's activities by Supervisor Witt. We concluded our day at 6:00 p.m., but the boys had another session for that evening. I can only say "hats off" to Schuylkill County Sportsmen and the first members of the Junior Conservation Camp.



Who ever thought we'd get involved with math in a stream survey? Assistant Supervisor Kulikosky leads group.



Collecting insects from stream bed presents a challenge for this trio.



FIRE BUILDING

The time-honored practice of turning wood to ash is a rewarding experience and as much a part of camping as morning dew or the twinkling stars overhead. Whether one chooses a deluxe motor home or a simple pup tent, camping just isn't camping without a campfire.

With modern heaters and stoves, the campfire's place for many campers is aesthetic rather than practical. For the winter or early spring camper, however, the fire still serves a utilitarian purpose as a source of warmth.

There is an art to building a proper campfire, but it is an easily mastered subject. There are many basic styles depending on the desired results—cooking, reflector, baking or simply for warmth.

Essentially, any type of campfire contains three basic ingredients: tinder, kindling and medium-sized firewood. A campfire should be kept as small as possible. Too many beginners feel they must have a gigantic blaze, resulting in blackened pots, charred food and scorched canvas.



A small campfire will provide ample warmth while conserving the wood supply. Often larger fires than are needed are built by inexperienced campers.

—photo by Daniel B. Kerr

Two of the most popular types of small campfires are the "teepee" and the "log cabin." To build either of these, the camper must begin with highly flammable tinder, topped with small kindling and the larger firewood.

In the "teepee" the tinder is placed in the center and then progressively larger layers are *loosely* piled around, slanting upwards. The wood should be piled loosely to allow air spaces for oxygen to fan the blaze.

We have found that a "log cabin" fire works well for us. Although we take our trusty gasoline stove along, except when backpacking, we find we do most of our cooking over an open wood fire. The "log cabin" works equally well either for cooking or for an evening campfire, simply by controlling the size of the blaze.

Basic construction is simple. First and foremost is the job of chopping an ample supply of wood so there will be plenty available to keep the fire going. We find a campers' buck saw and a small single bitted axe the most useful tools.

First, place a short hardwood log (six- to eight-inch diameter) at the rear of the fireplace: if split, cut side facing the fire area. Then place two three- or four-inch logs on either side of the fireplace, touching the rear log.

On top of these place stock an inch or so in diameter, perpendicular to the first layer. Reversing direction again, lay a "floor" of half-inch pieces completely across the one-inch stock leaving only small air spaces between.

Next place two small logs fairly close together stretching bone dry twigs (the tinder) between them. You can then build up the fire as high as you wish, criss-crossing each layer using progressively larger sticks. Be careful to leave air spaces.

The bottom layer of twigs is then ignited. Flames will draw up through the twigs and kindling immediately and in a few seconds you'll have a roaring campfire.

As the wood burns, it will fall

through to the floor creating an intensely hot area. More fuel can be added to the top.

A long fire can be used for cooking and warmth at the same time. Hot coals can be scraped to one side for cooking purposes while the blazing fire can be maintained to keep you warm as toast.

Most formal campsites will have either a fire ring or a stone fireplace. When building a fire in a wooded area where no formal fireplace is provided, be sure to scrape away all forest duff and dry grass down to mineral earth. Porous rocks or rocks with minute cracks from a stream should not be used as heat may cause steam, forcing the rock to explode.

In wet or snowy weather, try to build your fire where it will be sheltered from the wind, such as under an overhanging rock or behind a large log. A canvas tarp or poncho or a tent flap make excellent shelter. If good tinder is available, a fire should start in almost any kind of weather. In snow or very wet ground, build a foundation for the fire from green or punky downfall. Do not build under snow-laden branches where snow might fall and extinguish the blaze.

The best wood for fires in damp weather comes from standing dead trees. Chunks of pitch from dead evergreens also burn well.

Tinder is usually easily obtained. It includes such things as dry pine needles from the bottom branches of evergreens, bark or dry twigs. Matches should be waterproofed with wax and carried in a tightly-closed container.

Hardwoods burn longer and produce less smoke than soft woods. Among the best are ash, hickory, oak, dogwood, apple, birch and maple. Ash, unlike most trees, will even burn when it is green.

Sometimes, however, no hardwoods are available and soft wood must be utilized. Bear in mind that these will burn up fast so a larger supply is needed.

One final word of caution. Keep water or sand on hand to completely extinguish the blaze before you leave the campsite. Stir the ashes to make sure your fire is "dead" out. A smoldering log, fanned by winds, could blaze into flames days later causing a giant holocaust.

A FISHING FEATURE FOR FISHERMEN FROM FISHERMEN

FISH TALES



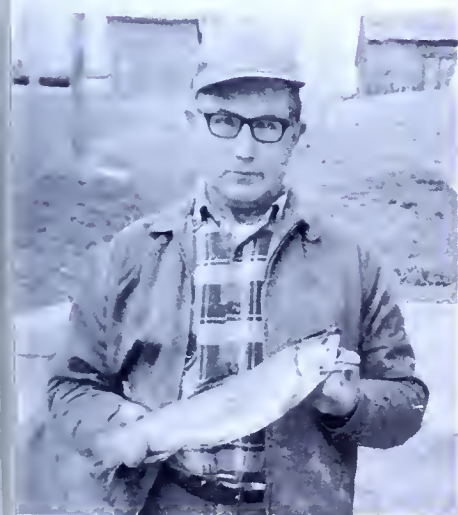
Fisherman JAMES PATTERSON of Lancaster holds big 18½ inch, 3½ pound brook trout he caught the first day of the 1971 trout season while fishing Muddy Run. Bait, not listed.



TED FITCH of Saegertown was fishing Lake Pymatuning near Harris Island when he hooked and landed this 29 inch, 7¾ pound walleye last spring. Caught on a jigger walleye harness.



Erie angler JAMES GABELLI caught 42 inch, 17½ pound muskie while fishing Edinboro Lake in Erie County last May. It won him membership in the Husky Musky Club.



This 17 inch, 2 pound brook trout was caught by fisherman FRANK CHMIELEWSKI of Dupont. He caught it from a beaver dam last spring on a C.P. Swing.



Palmyra angler SYLVESTER HOWARD caught 17½ inch, 2¼ pound brook trout while fishing Tulpehocken Creek. It hit a nightcrawler on spin gear.



Twenty-five inch, 5¼ pound pickerel was caught last July by fisherman RED MICKEY of Chambersburg. He caught it on an artificial nightcrawler.

FISH TALES



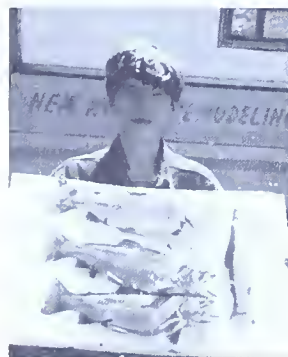
ED LICHVAR, 14, of Sharon caught this nice 16½ inch bowfin while fishing Little Pine Dam in Lycoming County last August. It hit a worm.



FRANK AUGUSTINE of Uniontown caught 15½ inch, 2¼ pound crappie while fishing the Yough Dam in Somerset County last July. It hit a worm.



EARL BROWN of Renova holds pair of big brook trout he caught last June while fishing Cross Fork Creek. Fish on left was 17½ inches, 3½ pounds; one on right was 18 inches, 3¾ pounds. One was taken on a wet fly; the other on a dry.



Fifteen-year-old RICHARD BARNES of Canonsburg (left) caught these three nice brook trout and a rainbow while fishing the Allegheny River in Warren County. Biggest was 15 inches. KIRK ROUDABUSH, 16, of Claysburg (center) caught 21 inch, 5½ pound smallmouth from the Raystown Branch of the Juniata near Saxton while ROBERT REDINGTON (right) of Lancaster caught 17½ inch 2½ pound brook trout from Muddy Run.



Seven-year-old JOHN JELOVICH, JR. of West Mifflin (top) holds 22¾ inch, 4½ pound walleye he caught at Donegal Lake last June while RICHARD LIEBOLD of Mars (bottom) holds 46 inch 26¼ pound muskie he took from the Allegheny in Forest County.



Thirteen-year-old SHARON AUMAN of Sunbury holds 22¼ inch, 3¼ pound channel catfish she caught from the Susquehanna River last July. It hit a shrimp.



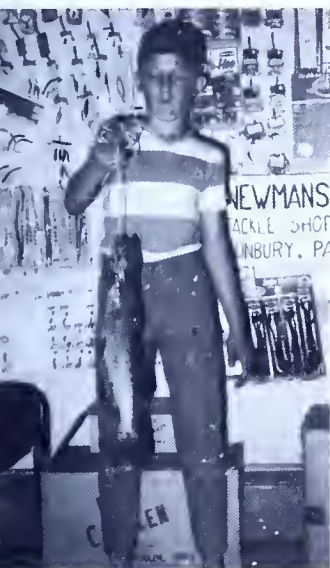
PHIL SCOTT, JR. of Stroudsburg holds pair of nice shad he caught last May while fishing the Delaware River in Monroe County. One measured 24 inches and weighed 5 pounds; the other was 22½ inches and 4½ pounds. Both hit shad darts.



Eleven-year-old BILLY WEBBER of Carlisle holds 30 inch, 11 pound carp he caught on a worm while fishing Conodoquinet Creek.



RONALD BRASHA and daughter TAMMY (above) with stringer of largemouth bass they caught from Presque Isle Bay in Erie County last May. Largest was over 5 pounds. THOMAS MOHR of Allentown (right) holds 20 inch, 5 pound smallmouth he caught on an artificial worm from the Delaware River last May.



FRANK KURTZ of Sunbury (left) holds 21 inch, 3 pound catfish he caught from the Susquehanna River on liver while JIM DOEBLER of Milton (right) holds 27½ inch, 9½ pound carp he caught on corn from the Susquehanna.



JOHN KURTZ of Sunbury (left) caught 20½ inch, 3-1/8 pound catfish fishing with nightcrawlers while CHET FOX, also of Sunbury, (right) holds 19½ inch, 3½ pound bullhead on cut bait. Both fish were taken from the Susquehanna River.



STEVE SNYDER of Duncansville holds 10 pound, 28 inch carp he caught from the Juniata River last July.



JACK LICHANER of Pittsburgh caught 34 inch, 9 pound northern while fishing the Shengango River Reservoir last May. It hit a live minnow.



MARK GROVE of Northumberland holds 21 inch, 3 pound catfish he caught from the Susquehanna River. It hit a nightcrawler.



TODD STRAWSER of Thompsettontown (left) holds 18½ inch, ¾ pound largemouth he caught from the Juniata River last June. It hit a nightcrawler. EDWARD P. KALE of Lebanon (right) caught 22 inch, 6 pound rainbow he caught on a minnow from Tulpehocken Creek.



RUSSEL FRY, 9, of Harrisburg (left) holds 11 inch, 1¼ pound rock bass he caught from Yellow Breeches Creek last April while REGGIE CALHOUN of Oakmont (right) holds 14¾ inch bullhead he caught from Deer Lake in Allegheny County on a minnow.



CASTING WITH THE CO-OPS—by Bill Porter

A MONTHLY FEATURE ABOUT COOPERATIVE NURSERY PROJECTS

PART III DIET

"Odd-ball" diets sets the theme for this third and final part on what to feed trout being produced in cooperative nurseries. And a point of emphasis should be made early in this segment: Because trout will eat the material placed before them, it does not follow that that material does them any good.

Before checking some specific cases, it should be repeated from Part II that trout need protein and amino acids. This is rather broad, and particularly in the protein category, may be misunderstood. Not all proteins can be digested or assimilated by the trout; therefore, particular protein materials must be fed—not just any protein. And with this for background, here are some examples of "noble" experiments that either did not work, or are debatable from the fish culturist's point of view.

A cooperative nursery fed hard boiled eggs to its trout. The eggs were secured from a processing plant, boiled, chopped, and fed. The trout gobbled them up with apparent relish and little obvious harm. There was only one problem—the fish did not grow well and eventually the egg diet was abandoned.

Some nurseries feed a good bit of bread. Again the fish eat the stuff, but do not grow well or become bloated

and soft-tissued as a result of the starchy food and in some cases mortality rates increased. Bread is not an endorsed food and many nurseries are convinced of this to the point that they discourage visitors from feeding their trout the material. Such a nursery is the Potter County Anglers, one of the largest in the program, who post signs on their property advising visitors not to feed bread.

A variety of animal tissues have been fed to trout other than those suggested in Parts I and II. Most of the meat is too fibrous for the short digestive tract of the trout. The meat is not assimilated or the fish becomes bound up with the tough connective tissues in the meat. However, the Tobyhanna club did feed four bear to its fish the other year and got away with it. The meat was well-ground and fed in small quantities to the larger fish. No problems developed because of the care in using the meat. But even if an adequate supply was available, the Fish Commission would not endorse it as an effective food.

In the same pattern, beef is also too fibrous to be a good reliable food even though beef liver is an excellent supplement. And still on meat, some nurseries report feeding groundhog flesh. The amount fed, or available, has been minimal with no major problems developing. But again, the coarseness of the meat and the amount of gristle tissue eliminates it from the quality foods.

Going to other materials, the Port Clinton Club, Schuylkill County, feeds some raw macaroni to its trout. The uncooked elbows are tossed into the raceway and as they soften, the trout will work on them. This is also a rather starchy food and could produce some problems if fed in quantity. The club also feeds pellets and other supplements so the trout have had no major setbacks. Such a diet by itself would bear watching. By the way, the Port Clinton boys insist that their fish like a little raw fruit and vegetables from time to time. Proof of the pudding comes from one of the members who operates a fresh produce stand who occasionally will chop up a couple of bananas, a tomato or two, or even a piece of watermelon. The fish eat it.

Then not to be completely negative, there are some other foods that are quite acceptable but not on the preferred list because of supply problems, seasonal conditions, and labor factors. For example, a Venango County nursery fed worms, a good natural food; but the supply problem became too great for a continuous diet. The same nursery also experimented with a variety of other goodies, perhaps not as acceptable as worms. Their trout received at various times cheese, peanut butter crackers, and some other tidbits not on the approved list.

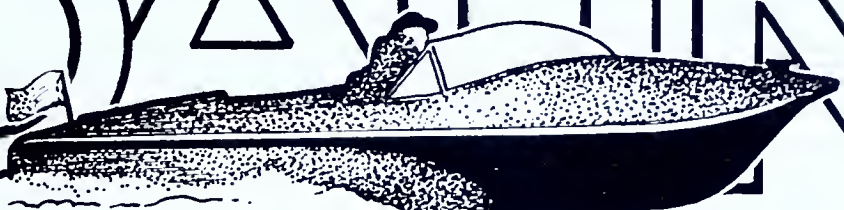
And of course there are other examples of varied diets that started out as honest attempts to feed trout for maximum growth at minimum cost that did not work particularly well, or may have produced serious problems for the nurseries involved. The end product of any deviation from the Fish Commission's recommended feeding program for most clubs was to return to the conventional dry pellet and accepted wet foods.

For clubs just starting in the cooperative nursery program, the suggestion is obvious: accept Bob Brown's advice, don't experiment with odd diets and the result will be a lot more healthy trout for followers of *Casting with the Co-ops* as a way to better fishing.



Waterways patrolman Jim Hazen, nursery manager Irvin Reppert, assistant coordinator Paul Byers, and club trustee Pete Moyer at the Port Clinton Fish and Game Association club grounds.

BOATING



QUESTIONS and ANSWERS · by CAPT. JACK ROSS ·

FROM G. H. T., HOUTZDALE:

"Would a three-blade prop be better than a two-blade on a five-horsepower outboard, and what kind of protection can I install on the engine to protect the prop when running in a shallow lake full of stumps?"

—There is no need for a three-blade propeller on a 5-hp. engine, since the two-blade wheel can adequately absorb all the power that the engine can generate. For your second problem, an effective guard can be fabricated by your local blacksmith or welding shop. Just mount a light circular band of steel or aluminum ahead of the prop, and this will cause the engine to kick up before the prop can contact the obstruction. The band can be 1/8 steel or 1/4 aluminum, bent to a circle just about an inch larger than the propeller diameter. Secure it to the lower unit with a single clamp or strap.



FROM J. M. B., PHILADELPHIA:

"Was I dreaming, or did I really see a suction dredge on the Little Schuylkill River just south of Tamaqua?"

—You were wide awake, and the state owns not one but five dredges located on desilting pools along the river. Mud, fine coal, silt and other water-born debris is settled out in a series of settling basins, which are cleaned periodically by the suction dredges. This controls the buildup of shoals in areas where it could cause flooding, and maintains the river in its lowest reaches without silting problems.



FROM W. G., REYNOLDSVILLE:

"My outboard motor uses a 25 to 1 mixture of gas and oil, but very few gas stations know how to blend this properly. How can I be sure of getting the right mix?"

—Add a kitchen measuring cup to your boat gear, with graduations in ounces. Whenever you fill your tank, just add five ounces of oil for each gallon of gas that goes in, and you'll have no problems.



FROM J. T. C., NORRISTOWN:

"What is the most powerful outboard motor available today?"

—Chrysler Corporation has announced a limited production of a 150-hp. racing engine that appears to lead the horsepower race at this writing. It features tuned exhaust stacks, higher crankcase pressures, and a compression above the piston of 180 pounds per square inch. Mercury is close behind with a 140-hp. model.

FROM S. R., PITTSBURGH:

"What kind of license is needed to qualify for operation of a towboat on the Ohio River and tributaries?"

—At present, there is no licensing requirement for operators of towing vessels on the Western Rivers. Legislation has been introduced perennially in the U.S. Congress to require such licensing, but to date none of these bills has become law. At first blush, it might seem that the situation was one that encouraged poorly qualified persons to navigate the huge tows on the rivers, but when you consider the owner's position, you will understand that a company which has paid as much as five million dollars for a modern, high-powered boat is not likely to entrust it to an inexperienced captain. While many of the skippers for the large companies are licensed, the great majority of the unlicensed captains operating their own boats or those of small companies are equally skillful and competent. The ever-increasing cost of boats and barges, together with the steady rise in marine insurance rates, operates effectively to insure that the quality of the navigators will be high.



FROM C. R. L., HARRISBURG:

"For boaters who also like to take pictures, what can you recommend to keep my shots from being washed out because of glare off the water?"

—Good boating photographs are generally obtained by the use of filters; on bright, hazy days, use a K-2 yellow, to improve the contrast. For very bright sunny afternoons, a red or Polaroid filter will usually produce better results. Remember to open up or slow down to compensate for the filter, and an added bonus is that you will get striking cloud effects due to the filter darkening the blue of the sky.



FROM S. E., VANPORT:

"If my boat is damaged while in winter storage, is the boatyard responsible?"

—Unless the damage or loss is clearly the result of negligence on the part of the yard, they are not generally liable. Your own insurance policy, however, covers this type of loss, provided you have a standard form of marine insurance.



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FEBRUARY, 1972

Angler

the
**Keystone State's
Official
FISHING·BOATING
Magazine...**

25c
Single Copy



Our Heritage . . . Our Future . . .

More than a century ago, the Pennsylvania Fish Commission was created by an Act of Assembly that provided for but a single Commissioner. Within a few years the body was enlarged to three members and then six. Undergoing a number of name changes through the years, the group eventually evolved into the present nine member Fish Commission.

Today, the Commission is enjoying its greatest prosperity—should that term be found appropriate to describe its ever-expanding fisheries program which, coupled with an aggressive land and water acquisition and development program, has succeeded in bringing trophy-producing fishing and access to prime boating waters within easy driving distance of all Pennsylvanians.

Perhaps our continuing training programs are in no small way responsible for the fact that nearly 400 employees, Fisheries Biologists, Engineers, Waterways Patrolmen, Waterways Safety Coordinators, Fish Culturists, Maintenance Personnel, Equipment Operators, and Office Staff are effectively converting fishing license and boat registration dollars to some of the finest sportfishing and pleasure boating available.

Throughout our 106 year history, many dedicated administrators have directed the Commission's progress—and each has left an indelible mark in the Commission's annals. All shared a common goal: to retain and maintain Pennsylvania's tremendous waterways resources for the generations to come.

Times change . . . administrators, both in public service and private enterprise, move on to new challenges—leaving a temporary void.

To continue this tradition of service, the Pennsylvania Fish Commission has chosen Ralph W. Abele as our new Executive Director. Mr. Abele was concerned about a deteriorating environment many years ago and his achievements as a citizen won him the coveted American Motors Conservation Award in 1969, a tribute shared only by nine other nonprofessional conservation leaders in a nation of 200 million.

Ralph W. Abele, a resident of R.D. 1, Millers-town, is a 1942 graduate of the University of Pittsburgh and comes to us directly from the Joint Legislative Committee on Air and Water Pollution Control and Conservation, where he served as Executive Secretary.

We welcome, and introduce to you, Executive Director Ralph W. Abele.



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PENNSYLVANIA

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FEBRUARY, 1972

Volume 41/Number 2

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STATEWIDE with the EDITOR

February is the shortest, meanest month of all and seldom comes in anything but assorted shades of icy misty gray. Never seems to have any adverse effect on the fishing though; quite to the contrary, February can be counted on for good ice fishing STATEWIDE. While ice forms quite early in the northern tier counties, central and southern anglers may have to wait for February for good safe ice.



ON THE COVER Chet Mack (when he's not fishing doubles as Chief of Police in Luzerne County's Newport Twp.) proves one more time on Lake Jean that foul weather and good fishing seem to go hand in hand. Some years ago he and friend Lou Wilkie sat through a sleet storm and were rewarded with what I believe was Lake Jean's first legal musky . . . only went a little over three feet, but with

a #10 treble hook on 8 pound mono . . . well, *you* try it sometime!

Chet's using a device he swears by, a jaw spreader . . . claims it saves more short fish from dying than you can imagine . . . insists it ought to be standard equipment with every ice fisherman, especially on Lily Lake, (he says) where the young Northern Pike are taking rough treatment before being returned to the water. The spreader gives you room to carefully extract the hook without rushing to dodge sharp teeth.

So help me, Lake Jean at about 2300 feet is 15° cooler than anywhere else . . . even in summer! Ice gets pretty thick some years . . . remember measuring it at 29½" on one occasion . . . 30" would have been an easier figure to remember when bragging about it, but I couldn't find a spot that thick!

One of the best ice fishing trips I ever had was on a day that began sunny bright . . . got cloudy, snowed . . . that turned to rain and finally sleet! Harold Briggs and I had eleven "flags" that day; two were "wind bites"; pulled out a short pickerel, missed another . . . but the other seven? Seven nice fat pickerel up to 22 inches which is just about the size when those little "Y" bones become tolerable; they're big enough to see and remove before becoming stuck in the back of your throat. Needless to say, with that kind of weather prevailing, we were alone on the lake.

Ever notice how some fishermen seem to catch fish with such dependable regularity that they're downright disgusting? We justify our own failures by attributing their success to luck and I suppose that's part of it—sometimes. But when a man works at it, say ten, twenty or more years of trial and error and then connects con-

sistently . . . *LUCK* has nothing to do with it.

Our WATERWAYS PATROLMEN boast an assortment of backgrounds; carpenters, school teachers, miners, an electronics technician and a truck driver here and there—you name it, we've got one. Despite this pot-pourri, they all share a common denominator—they're fishermen . . . *good* fishermen. STATEWIDE, right now, they're either conducting ice fishing clinics (on the scene) or they're holding indoor evening classes in the FUNDAMENTALS OF FISHING . . . or both! They're sharing some of those secrets they've picked up over the years . . . some are their own, others have been picked up along the way.

I'll give you a fr instance. Most ice fishermen sound bottom, then wind up a foot or two of line and fish, naturally, a foot or two off the bottom. It's kind of standard procedure . . . if the fish don't bite, *then* we experiment—fish at different depths. Lou Jones, from up Wilkes-Barre way likes to position his bait (minnows) just above the weed tops. Now in some lakes this might well be just one or two feet off the bottom, but in some of our deeper lakes, it can be as much as three to six (or more) feet off the bottom. There's no way I can prove this to be the *best* way to fish . . . except that I've watched Lou fish over a period of a few ice seasons and never saw him catch *small* pickerel while fishermen with their tip-ups set all around him pick up the usual "shorties" in abundance! You'll have to try it and draw your own conclusions.

TROUT fishermen will be calling it quits February 20th . . . if that strikes a sad note just bear in mind that the April opener isn't that far away!



BONELESS SUCKERS?

—ALMOST!

While fishing in Muncy Creek one afternoon I caught a fish that I hadn't seen since I was a young girl. We (my father, grandfather and myself) used to catch one once in a while fishing in the North branch of the Susquehanna River. We called them shad suckers. I wonder if this is the right name or if they are something else. This fish weighed about 3 pounds and was about 18 inches long. It resembled a carp only the back fin was short like a sucker and it also had a sucker mouth. The body was wider and flatter than a sucker and the tail was more V shaped than a sucker. It had no feelers (or whatever they are called) on each side of the mouth like a carp. The head was shorter than a carp.

I have looked through your "Penna. Fishes" book and the only fish that I can find that even comes close to it is a fallfish. But the mouth was more like the sucker than the fallfish and the scales were larger than a sucker. It was bony too, just like a sucker. Can anyone tell me the official name of this fish?

By the way perhaps some of your readers would like to know how to clean a sucker, or any bony fish for that matter and not be bothered with those small bones. If this is done right even a small child could eat the flesh of a sucker without getting a small bone in his throat.

After scaling and removing the head, insides and the fins, lay the fish on its back and with a sharp knife, cut down each side of the backbone, being careful not to cut through the skin. Grasp the backbone with the fingers and remove, including the tail. You now have a flat piece of meat (the whole fish). With a sharp knife cut out the ribs, slant the knife as if you were filleting the fish. You now have 3 pieces. The ribs may be cooked as is, since the bones are large enough to see and pick out when eating. Now comes the most important step. With a long very sharp knife (I

like a chopping knife) slice the remainder of the fish crosswise, being careful to cut only the flesh and *not* through the skin. Make these slices as close together as you possibly can. The closer the cuts are made, the better those little nasty bones are cut up. The skin holds the pieces of fish together. I also cut my pike or pickerel this way—I've never had the luck of catching a muskellunge but if their flesh is bony, they could also be fixed this way!

We are very fond of fish and my husband and I love to fish. It is the best *relaxing recreation* there is.

Your magazine is one that gets read front to back. We aren't interested in the boating section but anything else we are, including camping.

MRS. GLENN SWEET, Muncy



Looks like a carp and a sucker? How about a "Carp sucker"? No, I didn't make that up for the occasion. Sounds like one although it's difficult to positively identify the fish without seeing it. Look anything like the photo?

Our thanks for your method of fixin' bony fish . . . there's some real fine flavor going to waste because of a few bones. I've heard of suckers being steamed, ever so carefully, and served with drawn butter . . . sort of a poor man's lobster! Ed.

SCREW LOOSE?

Having been to Greenville to visit my brother, I absconded with his copy of the October 1971 Angler and smuggled it across the Ohio border without being caught, thereupon I sat down to leisurely read it.

With regard to the article on "How To Keep A Quiet Craft" by Wayne Heyman. After I read the article, I must assume that he must be your regular society columnist substituting for your mechanical columnist.

First of all, a bent connecting rod is serious, and if you don't want to cause more extensive damage, you had better get it fixed pronto. And while the mechanic has your motor apart, have him check the drive shaft and lower unit gearing, because the best way to bend a connecting rod is

to hit a submerged object or try to start it with a cylinder full of water.

Second, very few, if any, of the outboards running today have tappets. They have reed valves, and they are just as noisy hot as they are cold.

Third, if it's hard to control and maintain a course, check the trim of the motor. If it's tucked in too far, it will cause erratic steering, and if the situation gets serious the boat will either try to roll over or play submarine.

And now to the dreaded knock, that may be the tappets, as I said before, "there ain't any."

Generator brushes too tight or too loose? If you don't know where to find the generator, you sure aren't going to know how to adjust them!

Distributor shaft? Forget it, you won't know how to find it either.

Water pump lubrication? On an outboard? Now here's another one. On an outboard the pump is water lubricated, and if you ran out of water, you are in trouble.

Loose screws? I think we had better start with the columnist that wrote this.

Rubber gaskets? On gasoline? Saints preserve us and have the fire extinguisher ready, I hope you don't get sued over this one. The gasoline will eat that rubber up so fast that it will look like chewing gum before you get across the lake. And if it doesn't leak all over the place, the rubber that is inside will plug up everything in the fuel system, and boy will you ever hear it from your mechanic then. How about we make sure that those gaskets are neoprene.

Now, until Wayne learns more about being a mechanic, I'd recommend that he makes his craft really quiet and buy himself a good set of oars.

Incidentally, one of these days, I am going to get around to getting my own subscription so I won't have to go to Greenville and swipe my brother's.

Keep up the fine magazine, but watch those outboards—they have a habit of getting you in real trouble at the wrong time, if they are not well kept.

RAND D. WILLIAMS, Poland, Ohio

Wayne's not going to love you for this Rand! Meanwhile, you're "talking too much for the money you're spending"—get your own ANGLER! You can get twelve months for less than the gas it takes for the trip from Greenville to Poland, Ohio! Ed.

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Around the turn of the century the Michigan Conservation Commission introduced the American Smelt into Lake Michigan. These fish were supposed to provide forage for the huge populations of Trout and Salmon in the lake. The Smelt soon spread to all of the great lakes and today they are a major part of the huge commercial fishing crop that is harvested there. Lake Erie alone yields about 10 million pounds of Smelt each year to commercial trawlers in the U.S. and Canada.

Sport fishing for Smelt in Lake Erie has developed into a big thing out Erie way at two different times of the year. In early April, just about the time of the opening of Trout season, the Smelt start their spawning runs to the mouths of tributary streams. Old timers say that when the Forsythia blooms, it's time to get your dip net and head for one of these streams. Spawning takes place after dark and most dippers wait until midnight to go out. Dipping is best when the big lake is flat and calm. All of Pennsylvania's streams entering Lake Erie have some Smelt running into them at this time of the year. These are open to dipping with a net not over 20 inches in diameter or 20 inches square. Crooked Creek in western Erie county is the only stream where dipping is not permitted. This stream has been designated as permanent nursery waters for Rainbow Trout experimental work.

Smelt normally won't go above the second riffle that they encounter in

their spawning run. Most of them drop their eggs close to the mouth. Very sticky, these eggs adhere to everything in clusters. Seven to ten days later they hatch into tiny fishes that are at the mercy of everything that swims. Three or four years later those that survive return to the streams to spawn and perpetuate the species. At this time they are 8 to 9 inches long. Some will survive up until their eighth year. About 14 inches is top size for a Smelt.

The balance of the spring and summer the Smelt are out in deeper water and they are rarely caught on hook and line. They prefer the medium temperatures, not too hot or not too cold and this is generally pretty far out in the lake. Come freeze over, the Smelt are attracted by the warmer waters from shore discharges inside Presque Isle bay and they head there in schools. This starts the second great Smelt fishing "season."

Presque Isle Bay has 3840 surface acres and on a good Saturday or Sunday it's not unusual to see three or four thousand ice fishermen out there at one time. Most of these fishermen are after Perch or Smelt. Perch are generally caught close to the bottom at the 20 foot range. Smelt inhabit the waters above this and are sometimes caught just a foot or two under the ice. There are no size or creel limits on Perch or Smelt in Lake Erie. Veteran ice fishermen keep an eye peeled to see where the fish are biting and edge up as close as they can without interfering. They say that the

schools of fish are so concentrated that you can fish 20 feet away from a fellow catching fish like crazy and not get a bite yourself!

Methods and baits used for Perch and Smelt are identical. Only the depth varies. Most Erie ice fishermen start out with mousey grubs or minnows, 1 to 2 inches, as bait. After the first fish is caught, Perch eyes or strips cut from the belly are used. Bait shops are open all year long, so getting bait is no problem. Tip ups are not used to any extent, most fishing done with home made jigging rods. A piece of broom handle about a foot long with a spring steel wire or even an old hack saw blade inserted into one end and two pegs put into the handle to wind the line around make up the basic rod. A small metal washer is welded or soldered to the end of the wire or blade to act as a tip guide. A heavy sinker, the long narrow type, with a ring on each end is attached to the line; six or eight inches of leader material is used beyond this, then the hook or a small jig is tied on. Baits like the cut strip, Perch eye or mousey grub work better on a small jig. Minnows are better on just a plain small hook.

The bait is lowered to the bottom and then raised up a foot or so for Perch fishing. For Smelt, various depths are tried until the right one is found. These home made rods are propped up so that the line drops directly down through the center of

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FISHING OUTLOOK

By-- Stan Paulakovich





*Joey Palombi of Sharon, Pa.
with catch of
Bluegills and Crappies.*

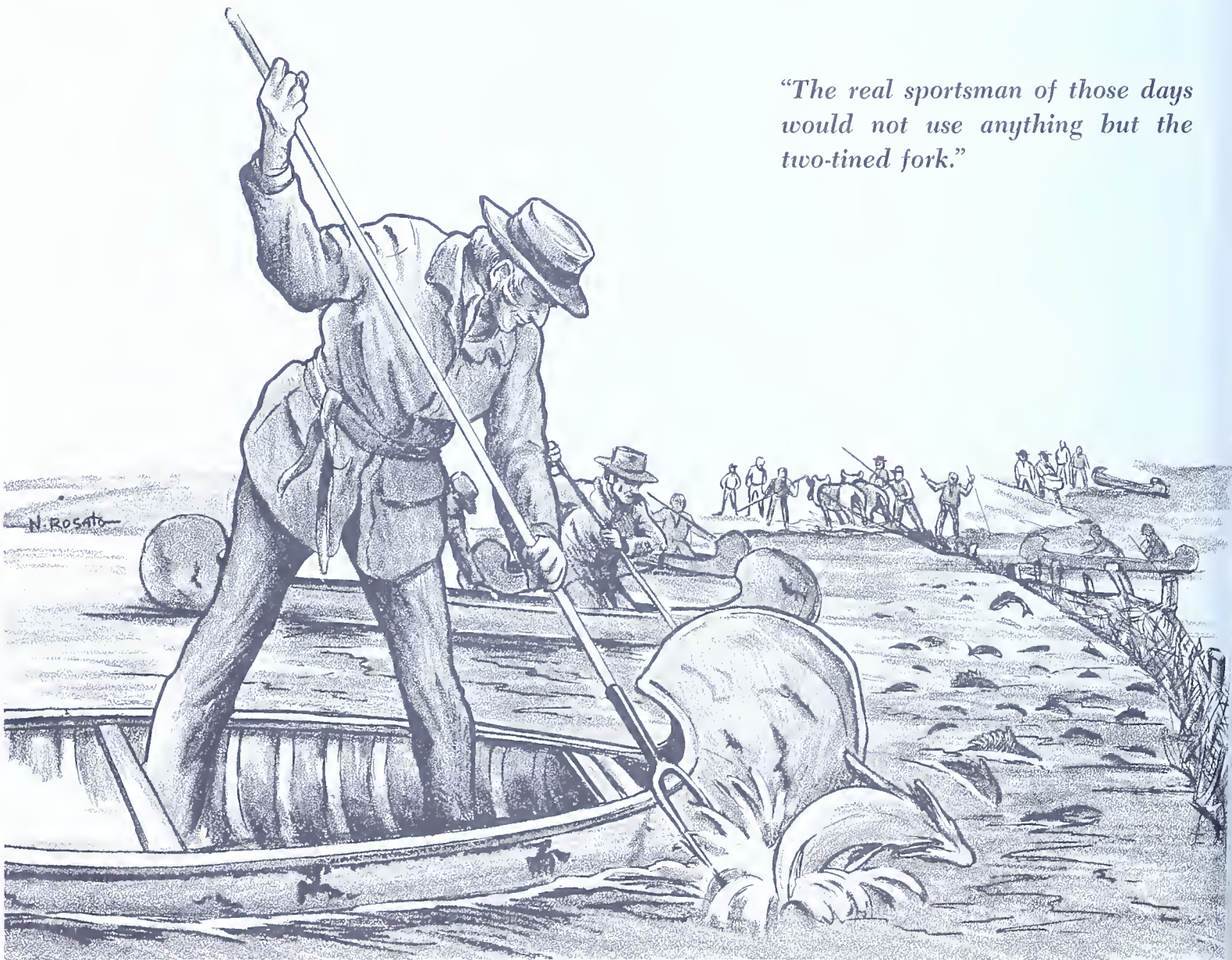
Allegheny River

FISHING PARTY

1845

by Steve Szalewicz

*"The real sportsman of those days
would not use anything but the
two-tined fork."*



The author takes us back to the days when fishing was a means of replenishing the family larder. Even so, then—as now—it was still fun!

This is not meant to be a boastful recital of my fishing conquests on the Allegheny River in Venango, Forest and Warren counties, but—

I can remember several times at Rockmere eddy near Oil City when I caught as many as 50 smallmouth bass in an afternoon;

Or a late November morning at Eagle Rock when five casts of a jig produced five walleyes;

And an October mid-day at Baum below Tionesta when I had six muskie runs in two hours and lost every fish, not being able to land the same;

I have braced myself in the stiff ripples of the Allegheny at River Ridge near Franklin and caught 10-inch horned dace in May until I tired of landing them on a fly rod;

I have hopped about on the slippery gray boulders at Oleopolis and watched dozens of rock bass, some as big as your hand, attack my worms;

I have ignored pouring April rains to catch the limit of crappie bass in the Allegheny at Tionesta;

In the spring below Henrys Bend I have caught spawning suckers two at a time;

But whether I had the few good days or came home many times "skunked" I always wondered how good the fishing was in the spots mentioned here in the 1840s or 1850, before the discovery of waterpolluting oil in Oil Creek below Titusville or the erection of fish-killing tanneries at West Hickory.

Research of weekly newspapers of that period revealed very little. Either village talk about fishing was not very important, or the early settlers of this region did not have too much time to spend along the river in idle recreation.

Editions of the Tionesta weekly newspaper, the Republican, quite frequently carried items like this:

"William Lawrence brought in a mess of bass and salmon which he and another Tionestan caught. Among the fish was a pike weighing 19½ pounds and two that weighed 12 pounds apiece." (Presumably the pike were muskellunge).

But this item was in the April, 1875 issue.

About 10 years ago, Grace Morris, retired school teacher at Baum, (since deceased) made available, to me, "Memoirs of Pharez G. Waldo," who was born October 23, 1835 in West Oswego Creek, Tioga County, N.Y.

The Waldo family came to President on the Allegheny River in Venango County, in 1844.

When Pharez Waldo was 87 years old in January, 1923, he recounted some of his life experiences to his niece, Maude M. Morris.

He told of a "fishing party" which residents of President had in the early 1840s.

Apparently this "party" was held in the fall, for the Allegheny River would have to be at one of its lowest stages to permit such a "fishing" event to be held.

Pharez Waldo remembered:



"The pile that fell to my father was of course passed to me, but there were so many and they were so heavy that a neighbor hauled them home for me."

"When I was a boy of ten or twelve years old the people of President and surrounding country organized a fishing party, dividing the men into two groups.

"One crowd went to the lower end of the eddy at President and built a dam to keep the fish from going down the river. The other's went to the upper end of this eddy and built a brush seine.

Father was confined to his bed with rheumatism and so he told me that I would have to go with them in his place and do what I could to help.

"Some went to the woods and cut hickory saplings large enough to have holes bored through the butts and enough poles to reach across the river.

"The tops of the poles were twisted into a withe, passed through the hole in the butt of another pole and so on until there was enough to reach across the river.

"This was stretched along the beach above the deep water and brush brought from the woods was laid on this "back-bone."

"With this "back-bone" as a "starter" a great net was woven of hickory withes; most of the young fellows today would think it a long, hard job, but no one used to be afraid of work.

"Well, when it was finished, a cable was attached to each end, one set of men towing it across the river by means of canoes—that was before the days of "john-boats" but it was a poor man indeed who didn't have a canoe.

"Today they are the plaything of the well-to-do.

"It always took a day to get ready and then in the morning of the day it was to be drawn everyone was there.

"Some one would bring a team of oxen to hitch on if the pulling was too much, men in canoes enough to extend entirely across the river, spears in hand to hold the net down flat to the bottom of the river and men pulling on the cables at each end.

"As the net was worked down through the eddy big fish would make their appearance. These big fellows would first go down to the dam at the foot of the eddy, then

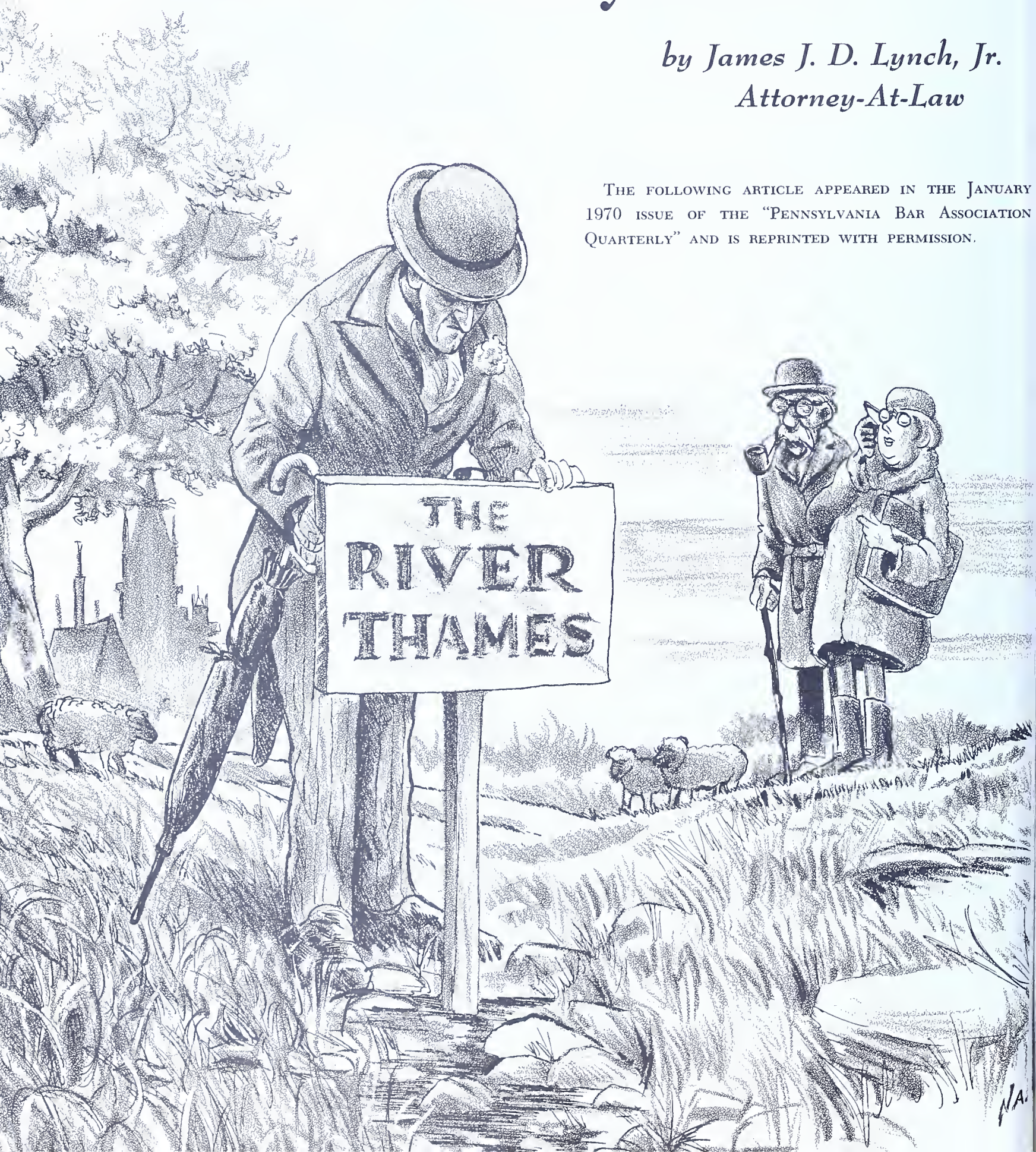
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RIPARIAN TITLE

In Pennsylvania

by James J. D. Lynch, Jr.
Attorney-At-Law

THE FOLLOWING ARTICLE APPEARED IN THE JANUARY 1970 ISSUE OF THE "PENNSYLVANIA BAR ASSOCIATION QUARTERLY" AND IS REPRINTED WITH PERMISSION.



When the practitioner or student thinks of the English Common Law, does he think of its historical settings? The Inns of Court, Old Bailey, The House of Parliament, Runnymede? These venerable places and institutions which did much to fashion and mold our legal system have a most interesting common denominator, the River Thames. The writer John Burns of Battersea once described the Thames as "liquid history," a description most apt for a river which has witnessed so many epoch-making events through the centuries and which flows within a few yards of these citadels of history, all of which with many others had a marked influence on the development of our legal system over the centuries.

A rather interesting and amusing yet relevant anecdote concerning the Thames is found in a brochure titled "The River Thames" published by the British Travel Association:

"Ninety miles to the west of London, at the foot of the Cotswold Hills in Gloucestershire, stands the old market town of Cirencester, dominated by the 15th century tower of one of the noblest parish churches in Britain. This was the Corinium of the Romans, one of the most important military centres established by the invading legions, and the modern highways which converge upon this 'capital of the Cotswolds' are built upon Roman foundations. Three miles southwest of the town, one of these ancient roads (the Fosse Way, which leads to Bristol and Bath) crosses the Thames by its first bridge. The bridge is a mere culvert, and the river a mere ditch—a ditch which, more often than not, is dry. The actual source is half a mile to the north of the road, in a meadow known as Trewsbury Mead, near the village of Coates. An ash tree grows alongside the spring (which seems to flow only in very wet weather), and in 1958 the Thames conservators placed a statue of Father Thames at this spot to mark the beginning of their river. In the Autumn of 1960 the spring flowed so copiously that there was sufficient water to float a canoe—so that it could truly be said that the Thames, on this occasion at least, was navigable from source to sea."

RIPARIAN TITLE

"Riparian" (as defined in Ballentine Law Dictionary, 2nd Edition) is derived from a Latin word "riparius" meaning "of or belonging to a bank of a river." A distinction is made between those whose lands abut upon a lake and those whose lands abut upon a river. In the former they are known as littoral owners and in the latter as riparian owners. For practical purposes the term riparian will include anyone whose lands are bounded by or positioned on or along a watercourse, irregardless of the manner or designation of the watercourse, whether it be called a bay, lake, pond, river, stream, run or creek.

In using the term "riparian" such will, unless otherwise stated, be taken to mean those waters of the ordinary flow and underflow of a watercourse. When such waters rise above the line of highest ordinary flow they are to be regarded as flood waters or waters to which riparian title and rights do not attach.

DISTINCTION BETWEEN WATERCOURSES AND SURFACE WATER

A "watercourse" is defined as "a stream of water, usually flowing in a definite channel having a bed and sides or banks and discharging itself into some other stream or body of water." It must present to the eye at a casual glance, the unmistakable evidence of the frequent running of water, but it need not flow continually.

Distinction must be taken between a regular flowing stream of water which at certain times or seasons is dried up and those occasional bursts of water which at times of freshets and storms descent from the hills. The former is considered to be a watercourse, having a definite channel or bed and sides or banks ultimately emptying into another body of water. The latter is considered "surface water" which is water usually created by rain or snow and which follows no definite course and has no substantial or permanent existence and does not constitute a watercourse. Thus mere drainage over the general surface of land is very different from continuous flow in a definite channel or bed.

Thus the interest that an insurer of title has or surveyor determining boundary lines has will be in watercourses and not surface waters and paths of drainage thereof.

IMPORTANCE OF CONCEPT OF WHAT IS NAVIGABLE OR NON-NAVIGABLE

The riparian rights and title to land abutting thereon are dependent upon whether a particular watercourse is considered navigable or non-navigable.

Historically the source of much of our law with regards to riparian title to real estate is derived from the British Common Law. "In the British Isles the rivers are inconsiderable in volume, in fact there are very few places in Great Britain which are more than 75 miles from the sea. Such rivers are of little value for purposes of navigation except where they are affected by the ebb and flow of the tide. From this it resulted naturally that royal or public streams, the beds of which belonged to the Crown, came to be distinguished from private streams, the beds of which belonged to the owners of the banks, by reference to the presence or absence of tidewater.

On this continent the early settlers found large rivers with navigable tributaries, forming vast systems of internal communication, extending hundreds and in some instances thousands of miles above the reach of tidewater. The Common Law definition was unsuited to this state of things and seems never to have been adopted in Pennsylvania nor for that matter by the Federal Government. On the contrary navigability in fact was made the

"Editor: For years fishermen have argued over who owns the streams and lakes in Pennsylvania; some claim the state—others say the Federal government does. Landowners, quite naturally, have an interest in the controversy, and many feel that the owners of adjacent land own the waterways.

To satisfy my curiosity about the intricacies of law in this respect, I spent many hours researching in the law section of Pattee Library at Penn State and happened upon an issue of the Pennsylvania Bar Association Quarterly. It contained the only really definitive article on riparian rights I have ever seen and should be of interest to Pennsylvania fishermen and boaters."

NED MINSHALL

Our thanks to reader Minshall for calling the article to our attention.

test by which the character of a stream as public or private was to be determined, and the great but tideless rivers of the state were held to be navigable rivers and public highways, belonging to the state, and held for the use of all her citizens.

Bodies of water are navigable in fact when they are used or are susceptible of being used in their ordinary condition as highways for commerce over which trade and travel are or may be conducted in customary modes of trade and travel on water.

On the consideration of the actual capacity and utility for the purposes of navigation, and hence the ultimate determination as to where riparian title lines will be settled, numerous, specific waters and rivers have been declared to be navigable and/or non-navigable in whole or in part by federal and state statutes and judicial decisions, the United States Army Corps of Engineers, the United States Coast Guard, and the Pennsylvania Department of Forest and Waters. A compilation of those streams of watercourses considered or determined to be navigable in whole or part in the Commonwealth of Pennsylvania will be found in the Appendices in the original printing. Any watercourse not found therein is deemed to be non-navigable.

TITLE TO PROPERTY ON NAVIGABLE WATERCOURSES IN PENNSYLVANIA

Before delving into this interesting area, a short discussion of the role that "meander lines" play in ascertaining title lines to riparian lands is in order. "Meander lines" are those lines run

in surveying particular portions of the public lands which border on navigable rivers, not as boundaries of the tract but for the purpose of defining the sinuosities of the banks of the stream, and as the means of ascertaining the quantity of land in the fraction subject to sale and which is to be paid for by the purchaser. In preparing the official plat from the field notes, the meander line is represented as the border line of the stream, and shows that the watercourse, and not the meander line as naturally run on the ground, is the boundary. Thus a meander line is not a boundary, unless it is laid out as a metes and bounds description in a conveyance.

The general rule is that the Commonwealth owns the land underlying its navigable waters in trust for the public. However, such ownership is subject to the paramount right of control by the Federal Government over commerce with foreign nations and among the several states. Ownership by the Commonwealth of submerged lands extends to the ordinary low water mark. Low water mark as used in this connection means the height of the water at ordinary stages of low water unaffected by drought and unchanged by artificial means.

Title to land on navigable waters extends to the low mark as it exists naturally and the riparian owner has no property right, title or interest as a landowner beyond the low water mark. In searching and checking title from prior deeds and records of conveyance and surveying riparian shores and banks of navigable waters, it is most important to determine the high water mark



The riparian rights and title to land abutting thereon are dependent upon whether a particular watercourse is considered navigable or non-navigable.

or line. This is so because a riparian owner's title to land between the high and low water mark is qualified in that it is subject to control and regulation by the State and Federal governments for the use and benefit of the public and its right of navigation. The common right of the public to use navigable waters for navigation is superior to other rights in the water and such is not confined to the main channel but extends over the entire surface of the water from shore to shore, subject only to natural and lawful artificial obstructions. However, this public right does not extend beyond the foreshore, that is, the high water line, except where a temporary use is made of the shore or bank in case of peril or emergency or where the right has been acquired by agreement, grant or prescription.

However, a riparian owner has the right of access to navigable waters in front of his land, distinct from and in addition to the general right of the public to use such waters or to use the

beach and such right is compensable in damages if interfered with. However, a riparian owner may use the land between the high and low water marks for such purposes as do not interfere with navigation, but he has no right to erect permanent structures thereon which will interfere with the right of the public without express authority.

Some important considerations in determining the ordinary high water mark of navigable waters (as for all practical purposes, this would be the utilitarian limit to a riparian owner's absolute, free control of riparian lands) are the characters of the bank or shore at a particular site in issue, and if it is difficult to ascertain the line of ordinary high water at this site, recourse may be had to other sites along the same stream.

There is a rather interesting test for determining the ordinary high water line of navigable waters. It is called the "vegetation test." It is useful where there is no clear, natural line impressed on the bank of a navigable stream. This test for a navigable stream's ordinary highwater mark means not that part within such line where all vegetation has been destroyed by watercovering soil, but that soil has been covered by water for sufficient periods of time to destroy its value for agricultural purposes. But if there is a clear line, as shown by erosion or other easily recognized characteristics such as shelving, changes in the character of soil, destruction of terrestrial vegetation and litter, these determine the line of ordinary high water.

Since the Commonwealth is the owner of the bed and land below the low water mark of navigable waters, it has the power to grant to others its lands under navigable waters limited by the public trust under which such land is held.

But any rights, titles and interests granted by the Commonwealth in the bed of any navigable watercourse within or on its boundaries may be declared void whenever such interest becomes or is deemed derogatory or inimical to or fails to serve the best interests of the public or the Commonwealth. See 32 Purdon's Statutes, Sections 675 et seq. The jurisdiction to void such grants is vested in the Department of Forests and Waters and it should be consulted to determine the current status of such grants.

It should be noted that where a navigable body of water forms its boundary, the Commonwealth may have title to the underlying land up to the middle of the body. This, of course, depends upon historical considerations where the original dividing line may have given one state more or less than one-half the width of the navigable river or lake.

Title of a riparian owner on navigable waters does not extend to islands opposite his land. Rather, islands in navigable waters are deemed to be the property of the Commonwealth. However, the Commonwealth, like any land owner, can grant or convey such islands to private individuals or entities. Thus, the owner of an island situated in navigable waters granted by the Commonwealth has title to the ordinary high water mark absolutely, unless the instrument states otherwise. Between that line and the ordinary low water mark, his title is qualified and his riparian rights are subject to control and regulation by the State and Federal governments.

There are certain natural actions which cause additions and/or deletions to the banks, beds and boundaries of riparian lands. These are variously known as accretion, avulsion and reliction.

Title by accretion is the title which the owner of land on the border of a stream or other navigable watercourse acquires to the addition made to his land by the imperceptible action of the water. The key to the addition is a "natural change" because the doctrine of accretion does not extend to land created by artificial causes such as the filling in of land once under water. Along the same line, where a navigable stream is diverted from its ordinary channel by artificial means, the land thus left dry does not vest in the riparian owner by accretion. In the case of accretion to an island whether it be owned by the Commonwealth or held under grant from the Commonwealth, the owner thereof is entitled to the land added thereto by accretion to the same extent as the owner of riparian land on the shore of the mainland.

"Reliction" is defined as the land uncovered by a gradual subsidence of water. "Avulsion" is the opposite of accretion and

reliction; it being the sudden and perceptible loss or addition to land by the action of water or otherwise. Thus, the same rules that apply to accretion also apply to reliction. Avulsion does not change or alter the riparian owner's title.

**TITLE TO PROPERTY ON
NON-NAVIGABLE WATERCOURSES IN PENNSYLVANIA**

As has been discussed earlier herein, unless a particular watercourse has been declared to be navigable in whole or part by the Federal Government, its Agencies or Courts or by the Commonwealth, its Agencies or Courts, it will be deemed to be non-navigable and as such our discussion of boundary lines of riparian owners can proceed from that point.



The general rule is that the Commonwealth owns the land underlying its navigable waters in trust for the public.

As was said earlier herein, what applied to meander lines on navigable watercourses also applies to non-navigable watercourses, i.e., a meander line is not a boundary line, unless it is laid out as a metes and bounds description in a conveyance or deed.

The basic rule to remember is that the owner of land bordering on a non-navigable watercourse owns the soil to bed thereunder to the thread thereof, i.e., his title extends to the middle of the stream. Thus, a grant by the Commonwealth of land bounded by a watercourse not declared navigable by law passes the land to the middle of the same.

This leads to the next consideration, what is the status of title to the bed or bank of a non-navigable watercourse subsequently declared navigable. The general rule is that such declaration does not, of itself, take from the owner title to the bed of the watercourse. In order to divest the owner's title, the proper action as provided by law must be followed, that is, notice, condemnation and compensation. However, this is not within the scope of this discourse.

In a fact situation where a person owns land on both sides of a non-navigable watercourse, he is entitled to the whole bed of the stream within the boundaries of his land.

Islands on non-navigable watercourses present a peculiar problem. Basically, if an owner has title to land on both sides of a stream, as said before, he owns the bed thereunder and this means that he owns all islands and flats arising above the bed and waterline. But where there are separate or different owners on both banks, then it becomes necessary to locate the middle line or thread thereof. The rule in such instances is that an

island which is divided by the thread of a river or stream is held by the owners of the banks in severalty, the dividing line running as if there were no island. If the island lies on one side of the dividing line, it belongs to the owner of the bank on that side.

In the fact situation where an island is divided by the thread of a non-navigable stream and the banks on either side are owned by different owners and the channel thereof shifts as to the determination of who owns any new land arising therefrom or land to one side thereof, the legal principles are not well settled in Pennsylvania. However, most of the American jurisdictions use the following rules, namely—

That where, by a sudden or violent change, the channel or shore on which riparian or littoral lands are bounded is shifted, the boundaries of such lands are unaffected and remain in their original position.

But where the change is gradual and imperceptible, whether caused by accretion or reliction, the boundaries shift with the shifting of the channel or shore. Thus, if the land of the riparian owner is increased, he is not accountable for the gain and if it is diminished, he has no recourse for the loss. See *Philadelphia Company v. Stimson*.

The above rules do not apply where the body of water or the watercourse as such is not made the boundary, but instead, the boundary is made a definite and fixed line as of the date of the conveyance by a survey with reference to the water or by high water marks as it then existed or by the banks of the water as it then existed.

TITLE TO LAKES AND PONDS

With the exception of Lake Erie, there are no navigable lakes and ponds bordering on or within the boundaries of the Commonwealth.

The pantentee of land on the shore of a non-navigable lake or pond takes, like the owner of the bank of a non-navigable river, but unlike a riparian owner on navigable waters, to the center of the body of water. However, a riparian owner's right in the water and land thereunder depend on his deed, rather than on his riparian status. Caution should be used, for it may be that a riparian owner's rights end at the shore, while title to the bed is in another.

The importance of referring to a deed may be illustrated in the following case. A deed described property as bounded on one side by a certain non-navigable lake, gave no courses and distances, recited that the property contained sixty acres more or less and made no mention of water rights. What were the limits of the grantee's interests? The Pennsylvania Superior Court in interpreting the language of the deed said that they were not entitled to any land beyond the line of the lake nor to any rights therein nor use of the water.

**SOURCES FOR DETERMINING THE NAVIGABILITY OR
NON-NAVIGABILITY OF PENNSYLVANIA WATERCOURSES**

As has been said before, there are seven sources of information as to whether a particular watercourse has been determined to be navigable or non-navigable in law in whole or part.

The first source to be checked is Acts of Congress. For example, the Act of July 27, 1916, declares Crum Creek in Delaware County from its confluence with the Delaware River and its new channel to be a navigable stream and the Federal Government is to have the right, title and interest in and to the bed of the new channel to ensure navigation.

The second source is Federal Court decisions. The following have been declared navigable in Pennsylvania: the Allegheny River, the Delaware River, the Monongahela River and the Ohio River.

A third source to be checked is the Coast Guard Regulations. The Coast Guard when necessary will make such determination under the authority and direction of the Commandant of the United States Coast Guard.

The last Federal source is the Department of the Army. The Secretary of the Army pursuant to Act of Congress has the au-

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HOW LARGE is a SMALL FISH?

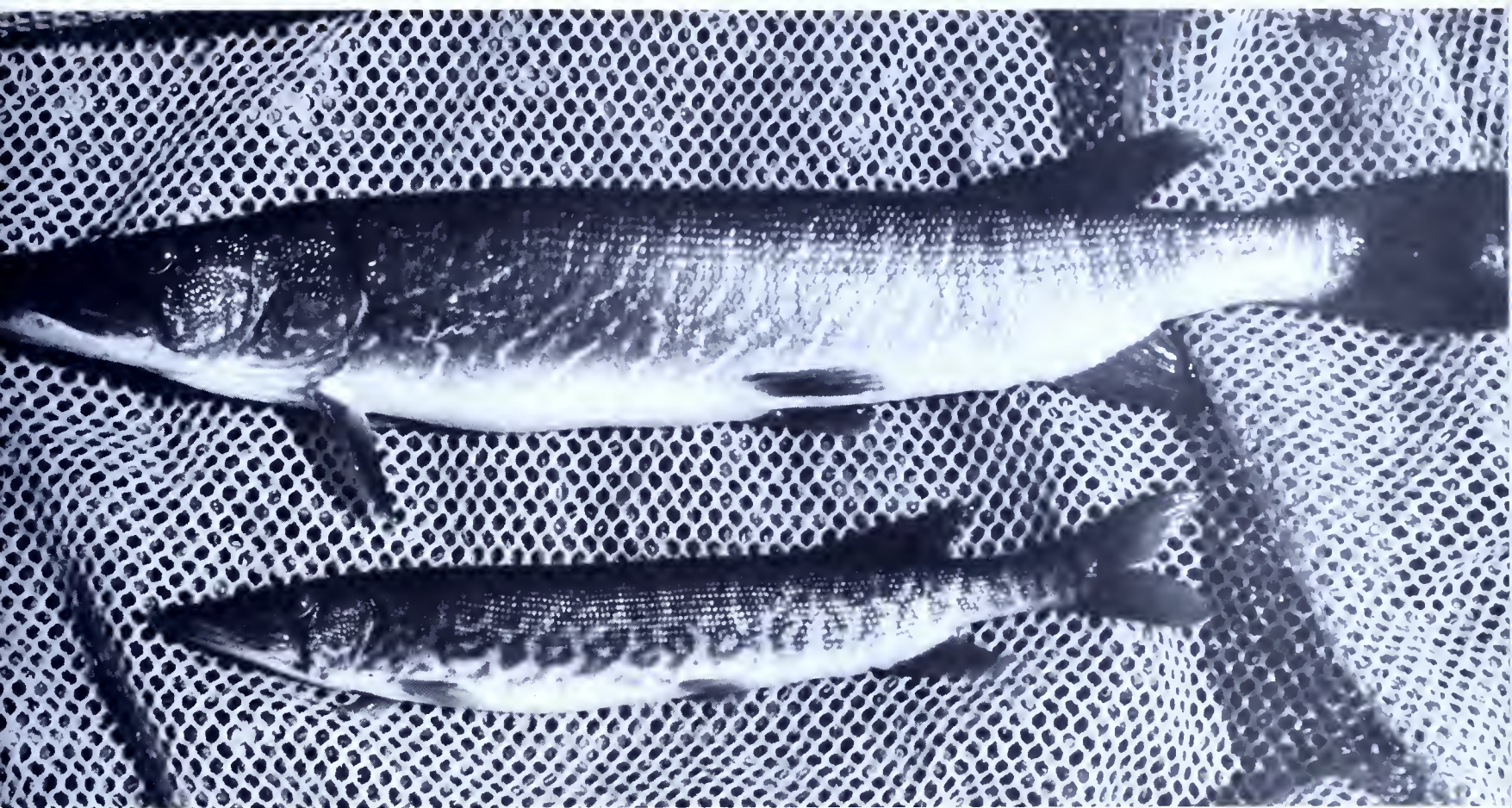
by Keen Buss

*... or how small
is a large fish?*

Sounds paradoxical, but so are the concepts of many anglers—whether they know it or not!

Can you imagine a muskellunge angler who would be thrilled with a trophy redbfin pickerel from North Carolina particularly when that trophy is only 13 inches long? Or can you imagine a western salmon fisherman bragging about a creel of 6 to 7 inch native trout from a Pennsylvania mountain stream? If you can imagine this you're fortunate because you not only have a wide understanding of fish but also of fishing. Just for the heck of it, for those who can't understand this, let's attempt to "figger out" what makes a small fish large and a large fish small and how the concept originated.

Let's start with trout. To be specific, let's begin with hatchery trout because over the years they have been the



WHICH IS THE TROPHY FISH?—The muskellunge (top) at 18.6 inches in length is only an immature two year old. The trophy fish (at the bottom) is the exceptionally large 12 inch grass pickerel.

mainstay of many anglers and also hatchery trout have brought about the most complaints. When speaking of hatchery trout one cannot refer to the past and say, "Oh for the good old days."

Fifty years ago and before, trout were stocked throughout the countryside from milk cans transported on trains. By necessity the stocking took place close to a railroad station. Forty years ago the most modern states continued to haul their trout in cans but those were transported on trucks which could reach further into the then back country. In both cases, the trout had to be small to survive the confinement for such long periods. These trout contributed nothing toward instant fishing and, we now know, very little toward future fishing, but at least the conservation departments were doing their best.

Thirty years ago the advent of recirculating units on fish transportation tanks made possible the modern "catchable trout" program. These tanks were capable of hauling yearling trout of catchable size anywhere the roads permitted. However, these yearling fish weren't the size of the present day trout but they provided plenty of sport. If you are old enough to remember, you will recall measuring each catch on opening day to ascertain whether the fish was legal or not. It isn't imagination which brings back those finger numbing memories because the fisheries report from Pennsylvania in 1942 revealed that 72 percent of the fish planted were less than 8 inches and only 6 percent exceeded 10 inches.

In contrast, using 1968 as an example, Pennsylvania

stocked only about 20 percent under 9 inches, 60 percent 9 to 11 inches and 20 percent in excess of 11 inches. Some stocked yearling rainbows may have reached 14 to 15 inches in the limestone waters of some hatcheries. In these same waters brook trout may have reached 10 to 12 inches. This increase in growth can be attributed to better hatchery techniques and better diets. The change from liver and fish diets to quality dried pellets not only improved the taste of the fish but also greatly increased the annual growth.

About the author: Keen Buss (formerly employed by the Pennsylvania Fish Commission,) served the Commission and Pennsylvania Anglers for many years in varying capacities, his most recent, that of Chief of Fisheries. He is best known, perhaps, for his work in the development of the silo method of rearing trout but many of us know him as an ardent angler and a fine photographer. Now, we find he's a collector of old Fishing licenses.

Keen desperately needs two fishing license buttons, 1932 & 1944 to complete his collection.

As barter, he's got extras of the following he'll swap for those two: '23, '24, '29, '30, '34, '36, '41, '49, and '59. He's also got non-residents in the following years: '27, '28, '31, '42, '47, '48, '52, '53, and '56, and complimentary in '37, '38, '39, '40, '45, and '46. Anyone interested in swapping to complete a collection of his own may communicate DIRECTLY with Keen Buss at Box 544, Boalsburg, Pa. 16827. Do not address your inquiries to the Angler.

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HOW LARGE IS A SMALL FISH?

continued from preceding page

Since brook trout are the native trout of the east, how does this hatchery species compare in size to wild trout of the same species? . . . of the same age? In a survey of 50 wild trout streams in Pennsylvania, 1,718 brook trout were measured and aged. Eighty-four percent of these fish were less than 6 inches and averaged only 4.3 inches and only 1¾ percent were over 8 inches, of these 2 were 10 inches. From a survey such as this, what size would you consider a trophy trout? Would everything above 8 inches be trophies and the two 10 inches from 1,718 trout sampled be super trophies, particularly when it usually takes better than four summers of growth for these relatively short-lived trout to reach 8 inches in the higher mountain streams?

A few years ago I visited a stocked trout lake on the opening day of the season. I didn't identify myself as representing the Fish Commission but as angler to angler I asked a fisherman along the shore "How's your luck?" With a disgusted look on his face, he reached down and lifted a stringer of brook trout from the water which ranged in size from 8 to 11 inches. Slamming the stringer back into

WHICH IS THE TROPHY FISH IN THE PHOTO BELOW? The 5 inch adult male at the bottom is the trophy fish in the environment from which he was taken. Large head and hooked fins make him an old residenter who probably ruled the pool. The hatchery fish on top was the same age.

the water, he looked up at me and said, "You know, the state has a lot of guts planting small fish like this." I was flabbergasted with the inference that a string of 8 to 11 inch brook trout did not make an exceptional morning's fishing. I had fished this region ever since I was big enough to carry a fishing pole and the smallest of his fish would have been a trophy to me. In fact in a nearby stream I took 45 trout one day and the largest was only 6½ inches but it was a super trout to me.

It would seem that the angler who based his remarks on the stringer of brook trout was not a skilled or knowledgeable angler or he would have recognized that the species of fish he had were larger than most of the native fish produced in that region. When I walked away I was sure I knew what the angler considered a small fish, but I certainly wondered what qualified as a "large fish" in his estimation.

Perhaps some fishermen base their judgment of the size of the fish by the age of the fish. This may be a factor, but it varies from water to water, species to species, and from one type of environment to another. To return to brook trout for an instant, some mountain streams will have brook trout which spawn at 4 inches. These are probably some of the older fish in the stream but certainly not acceptable to an angler. In some larger limestone areas brook trout grow much more quickly and could be double the size in half the time as the mountain trout. These would be acceptable to most anglers. Obviously age does not necessarily determine whether a fish is or is not a trophy.

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WINTER HIKING

by Ken Calnon

Are you tired of being couped up in the house all winter with nothing to do? Have TV programs become a bore to you? Has the cabin fever really gotten you down? Well don't give up, here is a sure cure for your frame of mind. Winter hiking!

Pennsylvania offers you a variety of places for a winter walk; established foot trails, unimproved mountain roads and old logging trails are all ideal for a cold weather hike. But the kind of winter hiking that I enjoy most is walking along my favorite mountain trout stream with its large hemlocks, quiet pools and stretches of fast water.

A winter walk along your pet stream can also be an enjoyable event, providing you make the correct preparations prior to your hike.

Temperature and terrain are two important factors to be taken into consideration when you are preparing for your hike. If the mercury is below 20° and you are hiking in a mountainous area you will need the following clothing items: a set of thermal underwear, a wool sweater, a heavy flannel shirt, and a pair of thick corduroy-type trousers. Insulated jackets feature warmth without weight and are ideal for winter hiking. Wool gloves or mittens, a cap with ear protectors, wool socks, and insulated boots are essential at these temperatures.

You must make proper clothing adjustments to prevent overheating when the temperature rises to the 20° to 30° range. Exchange the corduroy pants for denim wranglers and replace the heavy shirt with a lighter one. This will prevent you from perspiring and receiving a dangerous chill while resting.

You must make additional clothing changes when the temperature is between 30° to 45°. Substitute regular underwear in place of the winter style. The wranglers are still acceptable. Thick, woolen socks cushion your feet and should always be worn while hiking. At these tem-

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A LICENSE FOR BOAT OPERATORS?



by Capt. Chas. E. Leising,
USCG (Ret)

Director, Bureau of Waterways

A TOPIC OF NATIONAL CONCERN . . .

of vital interest to all

Pennsylvania pleasure boaters

The author retired from the U. S. Coast Guard in 1968 after 30 years active duty afloat and ashore in both line and engineering assignments. He was intimately acquainted with issuance of licenses to Merchant Marine officers, reviewed and analyzed marine casualties and motorboat accidents. He is presently Chairman of the Boating Safety Education Committee for National Association of State Boating Law Administrators (NASBLA). The accompanying article was written upon his return from NASBLA's November 16-18, 1971 meeting in Tampa, Florida where the subject of Operator Licensing was the hottest issue.

No boatman ever objects to some system that will require other operators to know at least as much about the Rules of the Road and the courtesies of boating as himself. I include here everyone who uses any kind of vessel for any water-oriented recreation. He seriously considers the dangers involved when he steps aboard his boat and realizes that these dangers will be markedly increased if he is unfortunate enough that day to encounter one or more irresponsible operators who know little (or care nothing) about safe operation!

In fact, when he really thinks about it he may not be too certain that he, himself, could not profit by some refresher training. If I am correct—even just for the “others”—we have a case for Boating Safety Education. And, if we're going to reach all those other fellows who might ruin your day in that unique way that a collision or a capsizing can, we must have some way of getting them “educated” to the dangers as well as the joys of boating. And, if we're to measure the effectiveness of any such pro-

gram and have some assurance we are taking the right steps to meet the concern of you knowledgeable boatmen, those who have “taken the course” must have some evidence (besides their skillful boat handling and demonstrated consideration for the safety of those in their boat as well as in yours) to show their friends that they are not part of the problem! So now, I think, we have a case for a Certificate attesting that they have actually satisfactorily completed an approved course that at least covers the basic, fundamental principles of Safe Boating and hopefully would give them the common sense answers to:

- (a) How do I keep my boat from capsizing or sinking?
- (b) How do I keep that other boat from hitting mine?
- (c) What difference does the weather make and what can I do about it?
- (d) What do I do if I can't avoid the problems of (a) and (b) and the weather forecast was wrong?
- (e) What steps do I, as skipper of my boat, take to safeguard my own life and those of my passengers so as to return them safely ashore?

Wouldn't everyone feel safer and enjoy their boating more if they had reason to believe that those “other” boatmen knew just as much as they themselves did? Or maybe more?

Pennsylvania Fish Commission Waterways Patrolmen have long been offering such a course in three 2-hour lessons. Those completing the course do get a Certificate. While our efforts last year “graduated” more than double the number of the year before, this was still only 1,515. The excellent courses offered by the Coast Guard Auxiliary, the U.S. Power Squadron and The American Red Cross are getting the same sad response! We must do better and if “voluntary” attendance doesn't increase many fold over the next several years, *compulsory* attendance—or even worse, in my opinion, *Operator Licensing*, is almost a certainty.

We don't need statistics to prove that boating activity is on the sharp increase. With more leisure time and more boatable water becoming available annually, the exposure of the boatman to the hazards of the water must increase.

We cannot wait longer to take more effective steps to handle the problem.

To many, *Operator Licensing* and *Compulsory Boat Safety Education* would sound like two terms to describe the same objectionable infringement upon a person's freedom. Discounting the latter point as being without merit in a society which accepts that government has a responsibility to protect citizens from dangerous actions of others, I'd like to point out a few reasons why the terms are more than a matter of semantics and why. I think that licensing is not only an undesirable step but an unnecessary one!

A Boating Safety Education Course will at least expose those in attendance to the many circumstances requiring good judgment and give enough knowledge to enable most persons to make proper decisions. They would know not only *what* lifesaving devices were required to be on board but *when* and *how* to wear them. They would be likely to know not only which boat had the right-of-way under all circumstances but even *more importantly*, the value of operating *defensively* and how to do it. They would, hopefully, learn the importance of *proper attitude* which is so definitely the crux of a major part of the problem—the need to proceed cautiously and show courtesy to other boatmen; the need to know the boat and the waters.

An Operator's License usually connotes something quite different. First, it almost certainly means that you've paid something for it and have been examined by someone who supposedly is well qualified to check the correctness of the dozen or so form questions asked. It is almost inconceivable to think of an in-depth interview combined with practical demonstrations of your ability to handle your particular type and size boat on a particular body of water. In other words, I contend that no meaningful examination can be designed to be administered by a bureaucrat at nominal expense without much red tape and scandals of all kind soon creeping in. The applicant might answer perfectly the questions he's asked but if he knows the very much more that he should know to be safe on the water he will have learned it by studying. In other words, he has "taken the course." But don't forget, there will be some who will find a way to get their "license" without the course!

They will never even have been exposed to what they should know. Eventually, licensing can deteriorate into a perfunctory, revenue-collecting and patronage plum-filled operation. The incentive to teach boating safety classes will lessen and the *need* for anyone to attend will diminish to zero except for those types who already know the wisdom of so doing.

The most insidious arguments heard in favor of licensing are that licenses are required for other types of operation—why not for recreational boat operators? One proponent at the recent NASBLA Conference in Tampa said he certainly wouldn't want to fly back home without a licensed pilot at the controls. Another asked why if boats carrying passengers for hire required licensed operators shouldn't you be afforded the same protection in a boat you ride as a guest. A national officer of a boating organization sur-

prised me with the argument that since he had to have a FAA license to pilot his plane and a FCC license to operate his radio, he could see no reason he shouldn't be licensed to operate his boat! The fallacy of these arguments is apparent. When you pay for a ride you are entitled to expect safe handling—presumably you board a boat as a guest willingly and able to exercise some control over the operator. The federal government operates the airways and controls the air waves—so it's right you should be licensed to use them. Neither the federal or state governments have or should have that kind of control over the launching of a boat on our waterways that is necessary when a plane takes off. The argument that auto driver's licensing systems show the benefits that would result falls flat or convinces to the contrary with one look at the statistics. In other words, *Education*, and not *Licensing*, is what is needed.

Some states have used the approach of requiring youths under certain ages to have completed a course. This is certainly a way to go with the thought that eventually all boat



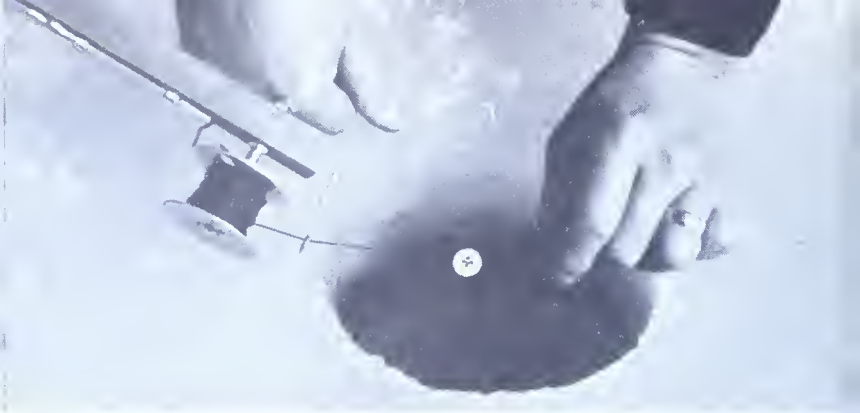
"What steps do I, as skipper of my boat, take to safeguard my own life and those of my passengers . . .?"

operators will have been educated. This, of course, falls somewhat short of the mark because many don't start boating until well after the prescribed age. How do those persons learn about safe boating? But even of more interest to me is the fact that we don't have as much trouble from the "under 16" age group as with their fathers and older brothers! For 1971 only 4.8% of our arrest summonses were issued to that group and only 9.5% of the Warnings! And, if we are to have a minimum age, why not a maximum age? Skill is a function of experience, and

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This custom made weighted clip can be replaced with any small piece of metal that will stay on the hook. Sound the bottom, then determine how far off the bottom you intend to fish . . . one foot? two? at "weed tops" (see page 2).



A small button can be threaded on your tip-up line before the hook is attached . . . to mark your fishing depth by sliding it into position. Each fish that "bites and runs" will strip off a different amount of line, but you'll be able to return a fresh bait to the same depth without resounding.

ICE FISHING



There's no disputing the walleye's reputation as TABLE KING and those who actively pursue him year after year rate him just as highly as a trophy . . . not necessarily because of his fighting qualities, but his fondness for minnows and his availability in so many of Pennsylvania's waters make the walleye a prize catch anytime!

Every now and then a veteran ice fisherman condescends to share one of his secrets and the wise angler makes a quick mental note for future reference.

Your methods may differ from those shown here, but these are given for the angler who as yet has no definite pattern to his ice fishing technique. They've all been tested and each has proved to be worthwhile when fishing through the ice—especially for the larger gamefish. Panfish are generally taken on lighter tackle; jigging rods (with smaller hooks and bait) are more suitable.

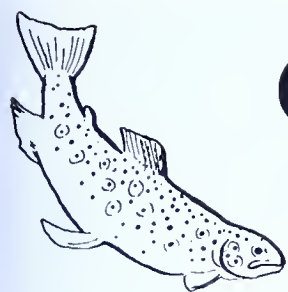
JIM YODER

Tip-up fishing almost demands hooking minnows directly under dorsal fin. A carefully handled minnow, hooked in this fashion, will remain alive and active for many hours. Choice of hook type varies with locality . . . size is generally dictated by bait size. Small trebles, #6 to #10 are favored in some areas while larger

singles are a good choice where undersize pickerel or walleyes are in abundance . . . they're easier to remove than trebles.

The use of a short (6" to 10") wire leader is favored by some when fishing for our sharp-toothed gamefish. This is not generally accepted as absolutely necessary, but if Northern Pike and Muskellunge are sought, it's cheap insurance.



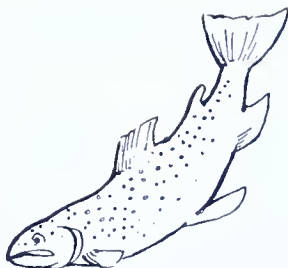


CASTING

WITH THE

CO-OPS

BY BILL PORTER



Every now and then it is time to take an inventory to see whether the business is still booming—or not. And since it has been a year since our last publicized accounting, it is time again to make a progress report. It is safe to say that the Cooperative Nursery Program is still “booming.”

Bob Brown, the Cooperative Nursery Coordinator, proves the point in his current annual report. Here are some extracts from that report to show the growth and continued interest in raising trout as a service project for the fishing public by dedicated sportsmen.

How about some statistics for starters? As of June 30, 1971, 90 organized sportsmen's groups sponsored 116 nurseries located within 44 counties of the Commonwealth.

Translation of the above shows the growth mentioned in the first paragraph. The figures represent an overall increase of 15 sponsors, 18 nurseries, and the program has moved into 7 additional counties.

The Pennsylvania Fish Commission delivered nearly 790,000 fingerlings to 91 nurseries in the trout program. Seven clubs moved into the egg-taking phase of fish production, using eggs from wild trout and domesticated spring-spawning rainbows. Other nurseries diversified by using Fish Commission and wild trout fingerlings. Still others added commercial fingerlings to the Commission's quota. And there were six nurseries established as auxiliaries to existing facilities to be used for emergency purposes and to hold carry-over fish.

To maintain some continuity here, the next question should be “What happened to the trout once raised?” Annual cooperative nursery reports, submitted during the 1970-71 period, show that 105 nurseries released 608,426 trout and salmon of com-

bined species in 463 streams and lakes in 44 counties—all public waters. The estimated weight of these fish was 244,937 pounds. Again a translation to show growth: This was an increase of over 120,000 fish with a weight gain of 29,448 pounds, adding 63 waters and 4 new counties receiving benefits.

Growth of the program can be measured in other ways. For instance, the increased attendance at the annual regional meetings for the cooperative nursery sportsmen. Interested persons appeared at the meetings in numbers beyond expectations of Fish Commission personnel involved in conducting the seminars. And not only did the sportsmen attend; but they became actively involved in discussion groups, requests for information, and sharing sessions with clubs having problems or new to the activity.

The year was not without its problems, however, 36 nurseries encountered serious issues with their fish or water supplies. Additional visits by Bob and his staff were required and certain clubs had many extra man hours invested in maintaining their nursery and overcoming certain emergencies.

Even in this phase of the report there was evidence of growth and im-

provement of techniques and fish raising skills. The 36-figure is actually 15 fewer serious problems reported from the previous year when there were fewer nurseries involved. The increase in nurseries and the decrease in major problems would seem to indicate the quality of sponsorship and the skills of the men involved in making the program as effective as it is.

Continued growth is expected for the current year and years to follow. In this sense plans have been made to furnish an estimated 129 nurseries with over 860,000 fingerling trout for rearing during the 1971-72 period.

Continued growth is also evident from the prospective nursery file. There are currently 51 sites under observation, representing 44 sponsors. More requests for water testing and site observations are expected as the year progresses.

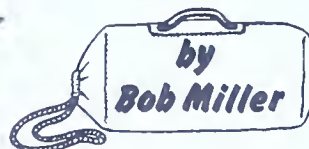
In recognition of the scope and value of the program, the Fish Commission has added a third full-time fish culturist to the Cooperative Nursery Coordinator's staff. Office personnel have also been assigned specifically to cooperative nursery work and, of course, the full staff of waterways patrolmen and other Fish Commission employees are actively involved.

And so, as we've said before, but this time with a firmer than ever belief, there is continued evidence of the excellence of the cooperative nursery program, the sponsors and men involved in it, and the total services the program provides the state's fishermen. As we've said many times before—possibly to the point of needless repetition—*Casting with the Co-ops* is a growing and worthwhile activity.





THE SEA BAG



A column of news devoted to the activities of boat clubs, flotillas, power squadrons and items of interest to Pennsylvania's boaters.

During the summer of '64 I visited the Northumberland Boat Club which has its headquarters along the Susquehanna River, just off Rt. 11, opposite Sunbury.

At that time, and this was in mid-Summer, available boating water for water skiing and other allied activities was sparse.

Last Summer, 1971, I paid a return visit to the boat club site and found, this time, plenty of good boating water even though it was mid-July and not during the early Spring when just about every waterway in the Commonwealth is normal or several feet above.

What made the difference this time was the fabridam, at Sunbury, which raised the water level perhaps five to eight feet and created an impoundment—Lake Augusta—which is turning out to be one of the finest pleasure boating areas in Pennsylvania.

Before the fabridam was completed and dedicated on a July 4th weekend in 1969, it was the general consensus of opinion that its completion would bring about an expansion of recreational facilities in that area.

This hasn't happened, at least to any great extent, possibly because much of the land area along both shorelines is privately owned and perhaps used for other purposes. However there is always a possibility that this can come about in the not too distant future—it just requires time.

My return visit was made during the middle of the week and I was given an opportunity to cruise up both branches of the river as far as a heavy fiberglass runabout, powered with a 35 hp outboard, would allow.

I found, on one branch, a seaplane moored in what once might have been an inaccessible area. Years before the fabridam the pilot probably would have run into shallow water.

In that same area I found house-

boats tied up along the shore, an extremely scenic shoreline which disappeared from view beyond our wake and several small islands, unlike anything I've run across on the lower Susquehanna, some filled with a low growing plant, or maybe it was just weeds, which looked like a carpet of gold.

I saw water skiers being towed by boats powered with inboard/outboard drives—watercraft which normally would never have ventured that far upstream; and a series of neatly kept private camping areas each with its own dock and certainly an inviting place to spend a weekend or a week.

Then just before the start of a wide sweeping turn for the return trip I could see in the distance the stacks at Bucknell University, at Lewisburg, which is about ten miles above Sunbury.

Without adequate water these places, scenes and activities just wouldn't exist today. In fact only the small craft owner would have a chance to traverse this section of the Susquehanna.

Unfortunately you can't please everyone, especially those who may think the fabridam is a cure-all for all the boating ills in this area. For example I heard one area resident

wonder why the dam made no difference to the water level at Bloomsburg.

This is a question which only an engineer could answer.

However its my personal opinion that it would take a dam much, much larger than the fabridam to make any difference in the water level at a community—Bloomsburg—which is approximately 25 miles away.

As previously mentioned the recreational development of the area on the part of private interests has been nil to date but by this Spring the new Shikellamy marina, built by the Department of Environmental Resources, should be in operation.

The marina, located at the junction of the two branches, will provide such facilities as a snack bar, sanitary facilities, parking area, launching ramp, floating docks and service area.

To the best of my knowledge this will be only the second public launching ramp in that area. The Northumberland Boat Club has a ramp which is available to the public but, as far as I can see, parking is at a premium. Parking will be no problem at the Shikellamy marina which was built as a part of the nearby Shikellamy State Park, a day use area overlooking the river.

The community of Northumberland has developed what appears to be a picnic area at the point where it is possible to launch a small fishing craft from shore which appears to have been graded for this purpose. However there is no hard surfaced ramp and launching might be a problem during wet weather.

The fabridam, at Sunbury, built as a flood control project and to provide adequate water for recreational boating on the Susquehanna River. (Aerial photo by Bob Miller)



BOATING



QUESTIONS and ANSWERS • by CAPT. JACK ROSS • • • • •

From S. R. C., Narberth:

"How important is celestial navigation for a boatman who makes occasional offshore fishing trips?"

—In this age of electronic wizardry, celestial navigation and shooting fixes by sextant is rapidly becoming a dead issue. To answer your question, a good radio direction finder costs less than a good sextant, and the average boatman can learn to use the RDF efficiently in a few hours, while mastery of the sextant requires months of hard study. Besides, for offshore work, the RDF is more accurate, and can be used when weather or sea conditions make the sextant useless.



From E. T. C., Allison Park:

"How far is it by river from Warren to Emlenton, and how long would it take for a comfortable canoe-fishing trip?"

—This distance on the Allegheny River is just 99 miles, and allowing adequate time for fishing and walking the canoe over the riffles, we would suggest planning the trip for five days.



From S. L., Pittsburgh:

"Why have so many boat builders switched from wood to fiberglass, and is plastic really that much better?"

—The main reason for the fiberglass domination of the pleasure boat market is simply cost. To quote an old friend of ours who has built boats all his life, "Any fool can pour gook into a mold, but it takes a craftsman to build a wood boat." Skilled labor costs have priced wooden boats out

of the market, especially in the lower-priced stock models, because there are simply not that many buyers willing to pay more for a better boat. The fact that a well-built wood or steel boat will last longer (with proper care) and give better service appears to be less important than the price, particularly for boatmen who only keep a boat for a few years.



From H. R. B., Springdale:

"How would you determine the proper size pipe to use for pontoons on a home-made catamaran houseboat?"

—A reasonable approach would be to have the pontoons not more than half immersed at the maximum design loading. For instance, if your boat is expected to weigh 2,000 lbs. when fully loaded, and the length is to be 15 feet, then you would need pipe of about 20-inch diameter. In general, pontoons of circular section

are less buoyant per pound of structural weight than floats of rectangular design, and have a rather narrow range of stability, since the first one-fourth of the draft provides very little displacement, and the last one-fourth, which is the critical portion when considering the possibility of foundering, is also a small percentage of the whole.



From C. A. J., McKeesport:

"How can you tell whether a boat needs to be recaulked?"

—If your feet keep getting wet, chances are it's time.



From G. E., Vandergrift:

"What types of boat horns are Coast Guard approved?"

—The Coast Guard issues approvals for life-saving devices, fire extinguishers and flame arresters for pleasure craft, and no other equipment. There are certain standards established for navigation lights and horns, among other things, but the individual products are not inspected or certified by the Coast Guard. The requirements for horns or whistles, simply stated, are as follows:

1. Every vessel must be so equipped as to be able to give and return signals as required by the Rules of the Road.

2. Class 1 boats must have a whistle or horn, operated by mouth, hand, or power, audible one-half mile.

3. Class 2 boats must have a hand- or power-operated horn, audible one mile.

4. Class 3 boats must have a power-operated horn audible one mile.



IT TOOK 500 GALLONS, YOUR TANK
MUST BE LEAKIN' INTO THE BILGE



FLY TYING

by

Chauncy K. Lively

The

Mighty Mites

Recently I was sorting through some flies in an old wet fly box and came across a pattern I'd nearly forgotten. It recalled to mind some wonderful days we'd had on the Penitentiary stretch of Spring Creek during the years when the stream was in its prime and hatches were large and numerous. One of the hatches was that of *Epeorus vitreus*, the smaller of the two so-called sulphur mayflies, but from the standpoint of the dry fly fisher the emergence of the duns was nearly always disappointing because the flies seemed to literally pop from the surface and fly away, instead of riding the water for a few seconds as any well-behaved mayfly should. Thus there was little surface feeding during the hatch unless a few flies were accidentally blown onto the water by gusts of wind. But it was then that we discovered that a size #16 Sandy Mite, fished dead-drift below the surface, would produce consistently when *E. vitreus* was emerging.

Fishing a wet fly during the emergence of duns would perhaps seem an anomaly to many a dry fly purist but in this instance its justification may be supported by examining the insect's mode of emergence. Unlike most mayflies, which emerge while the nymph is entrapped in the surface film, the dun of *E. vitreus* leaves its nymphal shell at the stream bottom and, with wings folded around its body and enveloped in a thin film of air, it floats to the surface where it becomes airborne almost immediately. It is during the fly's ascent to the surface that it becomes available to trout and a well-fished Sandy Mite is particularly effective at such a time.

The Sandy Mite is one of a series of wet flies originated by F. B. Potts of Missoula, Montana. Tied with hair bodies and sometimes with hair hackle, it is believed that the Mites were originally intended to represent caddis larvae found in the streams of the Rocky Mountains. Although they have proven successful for this specific purpose they are also good, all-around wet fly/ nymph patterns for general trout fishing.

The body of the Sandy Mite shown in the photo-illustrations is of fine bucktail hair and not of hollow deer

body hair, which would tend to make the fly buoyant. The hair should be a sparse bunch, no thicker than half the diameter of a match, and it is wound around the hook in much the same manner as making a floss body. Binding the tips of the hair and winding the butts utilizes the natural taper of the hair to produce a nicely proportioned body without the necessity of building up successive layers. The hair color I like best for this pattern is yellowish tan, found near the edges on the back of a yellow-dyed bucktail.

The Mites may be tied in any size desired but as general patterns I've found them most useful in the smaller sizes, from #14 down to #22. All are basically as shown in the illustrations except for the hair hackle, as used in the Mister Mite. Here the tips of the hair extending over the eye are not trimmed off as shown in Fig. #3. Instead, after the body and ribbing are wound forward and trimmed, the hair tips are pressed backward and distributed around the hook, held in place with a turn or two of thread as the head is made.

There are many Western fly patterns which have never found popularity east of the Mississippi River, due mainly to the differences in stream insects on the opposite sides of the continent. But the Mites are deserving of more widespread use in the East because, like the Adams, they represent trout food present in nearly all streams.

Dressing for two other Mites are as follows:

Lady Mite

Tying thread: Black
Ribbing: Orange thread
Body: Badger hair with black ends tied in
Hackle: Badger

Mister Mite

Tying thread: Black
Ribbing: Orange thread
Body: Dark brown hair from bucktail
Hackle: Dark brown hair

Tying the Sandy Mite:



1.

◀ 1. Clamp a size #16 wet fly hook in vise and tie in fine yellow tying thread at bend.

2. For ribbing tie in a 3" strand of ▶ orange thread at bend. Wind tying thread over end of ribbing and half-hitch behind eye.



2.



3.

◀ 3. Cut a sparse bunch of yellowish tan hair from a yellow-dyed bucktail and bind to hook with tips extending over eye. Spiral thread back to bend of hook, then return thread and half-hitch behind eye. Trim waste hair tips.

4. Grasp hair by butts, twist bunch ▶ slightly and wind hair forward in counter-clockwise direction. Tie off behind eye and trim off waste ends.



4.



5.

◀ 5. Wind ribbing forward, clockwise, and tie off behind eye. Trim off waste.

6. Select a soft, webby ginger hackle ▶ with barbule length about 1½ times the gape of hook. Tie in on edge, at right angle to hook, with dull side toward bend. Bend hackle root forward and bind under hook. Trim off excess root.



6.



7.

◀ 7. Wind hackle two turns only and tie off. Build up head with thread and whip-finish as shown. A drop of head lacquer on finish windings completes fly.

8. Left: Mister Mite; Center: Sandy Mite; ▶ Right: Lady Mite.



8.



"GIVE ME THE GOOD OLE DAYS"

This past summer has been one of the toughest yet for Fish Commission Law Enforcement Officers.irate boaters seem to be the worst offenders as the list of incidents seem to grow. In the Three Rivers area, around Pittsburgh, we've had boaters go over one of the dams deliberately—apparently for the thrill! Another drove his speed boat into a bridge pier; there have been several cases of narcotics being used and found aboard boats; another boater wanted to use fisticuffs when stopped for overloading and negligent operation; several men aboard a pleasure boat assaulted a deputy when he attempted to investigate their pulling a boy's fishing rod into the river with the prop of their motor! There also were two incidents of boating groups attempting to use vigilante tactics, taking the law into their own hands.

What happened to the good ole days of a Conservation Officer stocking the local fishing hole, or showing a group of boys how to put a worm on a hook?

—Waterways Patrolman JAMES R. SMITH (S/Allegheny Co.)



HE SAID, "IT'S A FREE COUNTRY, ISN'T IT?"

AN EXPERT (?)

At the Pennsylvania Bowhunter's Festival at Forksville the live fish display did not have any name plates last year. I did this purposely to see how many people would be interested enough to ask about the different fish displayed. One man incorrectly identified thirteen species of fish for his

friends—he did know though an eel when he saw one! I asked if he would be interested in a fish identification book. "No, I have fished all my life and I know them all," he said. I could not help but wonder what kind of a story he will have, if he ever gets picked up with the wrong fish in his possession out of season!

—Waterways Patrolman G. W. FRANK KANN (Sullivan/Lycoming Co.)

TROPHY BROWN TROUT

Upperwoods Pond is noted for nice size trout and very good Kokanee fishing. In years past the Fish Commission's fall netting for Kokanee (to get eggs) has seen some very large Brown Trout taken in nets. These fish have been returned to waters and until this year very few were taken by hook and line. Now that trolling with electric motors is permitted, a twelve and seven and one-half pounder have been taken!

—Waterways Patrolman H. F. REYNOLDS (Wayne Co.)

PLEASE COME BACK!

One of my litterbug signs placed along the Clarion River in the Millstone area had this hand written note attached underneath. "We have been here for five days and have enjoyed this beautiful area. We have cleaned the area and expect you to do the same when you use this spot. Fishing was fair and we enjoyed it also. "Keep America beautiful."

I can add to this that these people are welcome back any time. . . .

—Waterways Patrolman BERNARD D. AMBROSE (Elk Co.)

SORRY ABOUT THAT!

Our Waterways Patrolmen spend a great deal of time helping fishermen in every way possible; from teaching the novice how to fish, to giving the veteran angler a good tip on where to find them with the hope that their trips prove fruitful. Some times things still don't work out well. During last years Coho run on Lake Erie, a patrolman (who will remain nameless)

noticed a boat with a stringer hanging over the side and knew that lady luck had smiled on the occupants. Several dignitaries were aboard who had never seen a Coho Salmon, so he hailed the lucky fisherman and after some hand signaling got the idea across that they'd like to see his catch. Happy to oblige, the fisherman held up the stringer and proudly displayed a nice Coho. Threshing about, the fish managed to break the stringer and dropped back into the water free! Result: one very embarrassed



HOW ABOUT MAKING UP AN EXTRA PRINT FOR ME?

Waterways Patrolman and one very unhappy, irate fisherman. You may doubt this Kenneth, but believe me, he really didn't want to lose that Coho!

—FRANK A. KULIKOSKY Asst. Regional Supervisor (Region IV)

TUNA, ANYONE?

A fisherman found a strange dead fish along the banks of the Little Lehigh Creek while fishing for trout. Not knowing what it was, he brought it to SWP Massini for identification. It was a tuna, weighing about 8 pounds. Talk about practical jokers!

—Waterways Patrolman FREDRICK MUSSEL (Lehigh Co.)

HATS OFF!

Recently a truck accident on Wyk-off Run caused some concern. A heavy tandem truck left the road at a narrow curve, turned over, and came to rest hanging over the stream, supported only by two small trees. The truck had about 10 tons of fertilizer and lost only a small quantity when overturning. Owner John Maurer of Phillipsburg in his concern for the stream went to great expense to remove the truck. I think John should be commended for his concern because about 7 miles of top notch trout water would have been killed if his attitude had been different.

—Waterways Patrolman STANLEY G. HASTINGS (Cameron Co.)

WANTED

Japanese translator who likes to fish.

SWP Robert Snyder is looking for such an individual since his new sonar type fish locator was delivered last week. It was made in Japan and all the instructions are in . . . you guessed it . . . Japanese! The reason for the request.

—Waterways Patrolman **G. T. CRAYTON**
(Allegheny Co.)

PHANTOM STRIKES AGAIN

I promised not to mention any names, but this is one of the funniest fishing tales I have ever heard. A group of fellows took an early morning fishing trip to Potter County a few years ago. They arrived at their chosen angling site while it was still dark and rather chilly. In order to be all set at daybreak, the men rigged their rods, placed them under the car, and climbed into the vehicle for a little extra shut-eye. During their nap, the fishermen heard some strange noises beneath the auto. They agreed it was probably a curious raccoon and nothing to worry about. Upon arising, the men found the cork handles of their rods had been eaten by a hungry porcupine!

—Waterways Patrolman **DONALD PARRISH**
(Beaver Co.)



THEY SAY PORCUPINES ARE GOOD
TO EAT . . . IF YOU'RE STARVING!

THE OBEDIENT TURTLE

A five day outdoor workshop in Conservation was held at Camp Kauffman, for the sixth grade students of the Cranberry Elementary Schools. Monday and Tuesday of the week the programs were held by the Pennsylvania Fish Commission, with talks and demonstrations of fly and spin casting, stream surveys and films. On Tuesday, the groups were split into two, and while one was on a stream shocking and survey pro-

gram, the other group was given a lecture and a film was shown describing what to look for in a stream, and showing how reproduction takes place. Many mounted specimens were used, along with some live ones. We had a live softshell turtle as well as a freeze dried box turtle on display. It was fun to watch the kids looking and waiting for the freeze dried turtle to get up and walk away, because it is so life like I think that we fooled most all of them into thinking that it was highly trained to stand up and pay attention to the lecture.

—Waterways Patrolman **ROBERT J. CORTEZ**
(Clarion Co.)

NO CREEL LIMIT ON BATS

While talking to an avid fly fisherman here in Lebanon County, I asked him the standard question, "How are they hitting?" His answer—"No fish, One BAT." It seems that around dusk an enthusiastic back cast hooked a bat which gave this fisherman a real good aerial fight which led to the bat's doom and added another fish story for this fisherman's already overflowing creel of fish stories.

—Waterways Patrolman
PAUL T. HORNBERGER (Lebanon Co.)

COOPERATION DOES IT!

A big tip of the hat goes to Laogan Township Recreation Association, Lakemont Lions Club, Uncle Joe's Woodshed, and the Blair County Federation of Sportsman's Clubs for providing supervision, prizes, and bait, so that approximately 600 area youngsters could participate in the Fish Commission's Cane Pole Program held at Lakemont Park Pond this June. I also wish to personally thank the Blair County Special Waterways Patrolman Force who spent that very hectic day unsnarling lines, removing prize catches from hooks, and removing hooks from participants clothing. Another special thanks goes to Bucky Krause, editor of the Fur, Fin, and Feathers Column in the Altoona Mirror, for acting as official weighmaster and measurer.

—Waterways Patrolman **WALTER A. ROSSER**
(Blair County)

UNBELIEVABLE!

A short five years ago, a fish 24-28 inches long and weighing 8 or 9 pounds taken from the Juniata River would, indeed, have caused a great deal of excitement. Today, one just

shakes his head in amazement when he overhears some of our local anglers telling each other about catching and returning some of the "small" muskies—only 36"-38" long.

—Waterways Patrolman **RICHARD OWENS**
(Mifflin/Juniata County)



YOU'RE BUSHED, BRAMBLY. YOU
"SEE" THINGS WHEN YOU'RE TIRED!

WE CAN'T WIN

I had occasion to read an article in the Arkansas Game and Fish Commission Magazine and the article seemed to fit the employees of the Law Enforcement Division so well that I wrote to those people and the editor, Mr. Jay Kaffka, has given permission for the writer to use the article. He says, "We would be delighted to have you reprint the article and circulate it to your fellow officers in Pennsylvania."

"If the conservation officer asks to see your license, he's insulting and distrustful.

If he takes your word for having one, he's lax and corrupt.

If he arrests a violator, he's showing how tough he can be.

If he gives the culprit another chance, he's just plain timid and showing favoritism.

If he labors day and night to enforce the law, he's a tyrant.

If he relaxes at all, he's a shirker and good-for-nothing crook.

If he talks game and fish conservation, he's fanatical.

If he keeps quiet, he's dumb or stupid.

If he accepts suggestion or advice, he lacks initiative.

If he works out problems for himself, he's a know it all.

If he acts like a gentleman, he's soft and too easy going

If he acts firm, he's an arrogant rascal.

—MILES D. WITT, Regional IV Supervisor

WINTER HIKING

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peratures, plain leather boots are more comfortable than rubber ones.

However, if your hiking consists mainly of walks on level ground or rolling hills, you should add more clothing to keep your body warm. At the same pace, you will not perspire as much on level ground as you would while walking up a steep incline.

For hiking in inclement weather, a light-weight vinyl raincoat or poncho with a hood is necessary. This type of rain gear folds into a small package and is easily carried in your pack.

A few good back packs for you to consider would be the following: for short hikes, the day bag is ideal. For all-day hikes which require rations and other items, a framed rucksack or an inexpensive aluminum pack frame with matching bag, along with nutritious food, will make your hike an enjoyable one.

If your hike is to be three to five hours in length, snack foods such as high energy candy bars, raisins, apples, oranges, canned fruits or puddings will be enough to sustain you. However, if you are planning an extended hike and will be eating meals on the trail, you should eat hearty ones. Here are a few menu suggestions: dehydrated soups, thick hamburgers, sliced potatoes and onions, pork chops, and Camper's Supreme. The latter is prepared by combining diced potatoes and carrots, sliced onions and sweet green peppers, meat balls, and a generous amount of butter, with salt and pepper to suit your taste.

Preparation time for trail food can be shortened considerably by partially cooking it at home previous to your hike. After cooling, the food is tightly wrapped in individual portions with heavy duty aluminum foil, and refrigerated. Beef patties can also be pre-shaped and wrapped in foil in advance, but they do not need pre-cooking. They are best prepared along the trail.

Shape a container from a doubled piece of aluminum foil for your soup. Then place it beside the fire to heat. Put the foil-wrapped food directly over the hot coals, turning at intervals until the ingredients are well done. With your appetite now satisfied, perhaps you will want photographs of your walk.

Winter hiking is a perfect excuse to photograph mountain and stream-side scenery. A 35mm single lens reflex camera, carrying case, a reliable light meter, a sturdy tripod, a sunshade and a cable release are all important "tools of the trade" to get you started in outdoor photography.

A cold weather walk is ideal for exploring "new" country for trout streams to fish next season. By advance stream study, you will be able to fish the choice "spots" on opening day. However, it is advisable to take along a good compass and a quadrangle map of the area you are planning to explore.

Perhaps bird watching will appeal to you as you hike a wooded slope. You will need a pair of binoculars in the 7 x 35 to 8 x 50 range. Also a reliable bird identification book is helpful and a pocket notebook to jot down species, sighting locations, and other field notes.

A winter walk also gives you the exercise that you need during these more inactive months. Start with short hikes and light loads at first, then increase your effort as your muscles become stronger. You will receive the proper exercise by traveling light. Packing unnecessary items will only result in an endurance test, rather than a rewarding outdoor experience.

Along your favorite stream you will find the rewards of winter hiking. There you are free from the pressures of everyday life. You are free to enjoy the beauty of the streamside scenery, free to revisit that certain pool where you lost that good brown trout, free to watch the sun sparkling on a dancing riffle, free to catch a glimpse of a hunting hawk, and free to relax and enjoy life at a slow, easy pace. Happy hiking!

RIPARIAN RIGHTS

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thority to issue regulations for the navigation of waters of the United States generally. This authority has been delegated by the Secretary to the United States Army Corps of Engineers which maintains regional offices from which information can be obtained.

The first Commonwealth source is the enactments of the General Assembly. Some important statutory title decisions are as follows:

- a) Act of September 20, 1783, states that title to the bed and channel of the Delaware River between Pennsylvania and New Jersey belong respectively to those states, the title of each to the bed extends from the respective shore to the middle of the river.
- b) The Act of September 25, 1786, decides specifically which islands in the Delaware River belong to Pennsylvania.
- c) The Act of June 5, 1937, P.L. 1664 as amended (71 P.S. Section 1840) which is a compact between Ohio and Pennsylvania concerning Pymatuning Lake which is situated partly in Ohio and partly in Pennsylvania provides that all islands within the Lake shall be considered as part of the State of Pennsylvania.
- d) The Act of June 6, 1887, provides for the boundary be-

tween New York and Pennsylvania on the Delaware River as the center of the main channel.

Another important source of information is judicial decisions as to the navigability or non-navigability of specific watercourses. In the case of *Commonwealth v. Fisher* (1830), the Susquehanna River was declared navigable in law; as was the Schuylkill River in *Philadelphia v. Collin*.

Finally, the last source of information is the Pennsylvania Department of Forests and Waters. The agent of the Department is the "Water and Power Resources Board," created by Act of Assembly of June 12, 1938. Section 807 reads: "The Board is vested with authority in the name of the Commonwealth to determine the course and to define the location, width, and depth of any river or stream or part thereof wholly or in part within or forming a part of this Commonwealth, except the tidal waters of the Delaware River and of its navigable tributaries. . . ."

Section 808 states that "whenever the Board shall define the location of a river or stream or part thereof, it shall prepare and have recorded a plan thereof in the office for the recording of deeds of the county where such location was defined, and such recording shall definitely fix the course, location and lines of such river for all such purposes in law, until altered by any subsequent plan recorded in like manner."

Therefore, it will be necessary to check the recorder's office and plans filed therein for accurate surveys and location of channel, center and other lines.

HOW LARGE IS A SMALL FISH?

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If the purpose of a hatchery planting then is to supplement the natural stocks, a planting of 8 inch brook trout could be a stocking of a truckload of trophies and the plantings of 10 inch trout could be a stocking of super trophies—particularly in heavily fished areas or mountain streams.

That's enough for trout! The point's been made, but what about the poor warmwater angler who doesn't rely on the stocking truck?

Fortunately for all of us, the human mind works in different ways and the concepts are all different. If this were not true, a North Carolina angler would never be satisfied with angling for the little redbfin pickerel. The redbfin pickerel is a trophy at 12 or 13 inches but yet these southern anglers will go and fish hard with very light tackle just to catch the little redbfin pickerel. Now this does not sound like much to the chain pickerel fisherman of Pennsylvania since the minimum is 15 inches which, of course, is above trophy size for the redbfin.

The cane pole fishery for chain pickerel in the northeast was a great sport and anybody who could catch a 15 to 18 inch pickerel considered he had a good day and if one of these pickerel was 20 inches or greater, he had a top-notch day for pickerel. However, if he were fishing for northern pike and caught a 15 inch northern, he would be disgusted with the hammer handle he had taken. A 15 inch northern pike is not worth bringing in the boat—a 24 inch northern may be acceptable to most people and a 30 inch northern pike in most places is considered a good fish.

But what about musky fishermen? A musky fisherman would not even consider anything as small as 24 inches because in the first place in most states muskies are not legal until they are 30 inches long and most musky fishermen, of course, are after the large, trophy fish. One does not brag about a 30 inch muskellunge as one would brag about a 30 inch northern.

To anyone but a fisherman this doesn't make sense. If the redbfin pickerel, chain pickerel, northern pike and muskellunge were of equal size, the average angler would not know one from the other. These fish in form look almost exactly alike. The only superficial difference is a few external markings and the maximum size they achieve. Therefore we can quickly eliminate shape as the determining factor that makes a small fish large or a large fish small—in the eye of the angler.

Perhaps we anglers base our concepts on previous experience, teaching or tradition. Let us examine these three factors by taking some kids on their first fishing trip to a pond filled with stunted 4 to 5 inch sunfish. These little fish may not look like much to you, but you will find that these eyeballs with a wiggle are the greatest thing that ever happened to the youngsters. Their first fishing trip is a success because they have not been biased by a long association with complaining anglers.

Why do anglers seem to be more conscious of larger fish in recent years? It is a tough question to answer but it is probably first the psychological factor, second that he

is being spoiled by a better quality hatchery output and third, and at least of equal importance, is the type of tackle an angler uses.

Since World War II spinning has come into its own and whether the spinners like it or not it does not take much technique to hook and land fish. Anybody can learn to cast in an hour or so and with the drag adjustments which are possible, all that is necessary for the angler to land a fish is to wind in until the fish is safely in the net. Usually these spinning outfits come with heavy, durable monofilament line which in conjunction with the drag, will land anything in inland waters. It is just not much fun to reel in a 9 inch trout on terminal tackle that would land a canoe. Years ago we used what was available to us at that time, very fine silk leaders. These silk leaders were less durable than our monofilament of today, and had a nasty tendency to rot when we forgot them in our leader boxes. This made the sport a little bit more interesting. As we landed each fish we attempted to play it as if the leader were rotten—we did not have drags on the reels to make up for our mistakes. We had to very gently walk after it down the stream or get in a quiet eddy where we could net it. In those days it took ability to put 9 inch trout in the creel!

There is nothing really wrong with spin fishing—if one is aware of what spin fishing is all about. If the people who complain about the small trout would use the ultra-light outfits with light lures they might find an enjoyment in fishing which they never knew existed before.

We have surveyed everything from origin, species, age, shape, tradition, to tackle to attempt to determine what makes a trophy fish. An attempt was made to be unbiased to this point but now we ought to include the real yardstick of evaluation—the love of fishing. There is probably no one in the United States who enjoys fishing more than George Harvey, a professor in the Physical Education School at Penn State University. He has taught fishing to thousands of students, has been a fishing guide to many dignitaries including President Eisenhower and has probably caught as many large fish, particularly trout, as any angler extant. Once I fished with George Harvey in Harvey's Lake (name coincidental) in a blinding snow storm in near zero weather. In spite of the inclement weather, George was having a ball. Can you guess what we were catching in that sub-zero wind? Smelt—8 inch smelt! To endure conditions like this to catch something less than trophy(?) fish is real love of the sport.

It has been my observation over the years in dealing with thousands of fishermen that the "gripers" are not usually the good fishermen or the ardent fishermen or perhaps may not even be fishermen at all in the true sense of the word, but individuals who feel that the purchase of a license automatically should insure them a creel filled with trophies on every trip. Perhaps if they were to appreciate that gaminess of a fish can be related to the weight of the tackle; that sport is really outwitting the species, and that the size of a fish is really in the *eye of the beholder*—then every fish would be a trophy and how large or small a fish is would no longer be an emotional consideration.



Next Summer's Campsite

The ice fisherman can seek out next summer's campsite while enjoying good fishing at the same time.

Ice fishing enthusiasts can enjoy their sport right now at Parker Dam State Park where it is growing in popularity each winter. Campers will wish to return later in the spring and summer to take advantage of the fine trout fishing available here and in nearby streams.

Centrally located in the northern part of the Commonwealth, Parker Dam, in Clearfield County, can be reached by either Pa. Route 255 or 153, both of which cross Interstate 80.

Consisting of 895-wooded acres, Parker Dam State Park is located in an area which played a prominent role in the logging era. The park is named for William Parker, who built a splash dam on the site in the lumbering heyday. This dam was washed out in 1899. The present 19.5-acre lake was formed by a dam across Laurel Run built by the Civilian Conservation Corps in 1936.

During the past two years the campground has been extensively renovated. New sites were added and others modernized, upping the total campsites from 65 to 106. All campsites have blacktop bases and trailer spurs. Tenters can pitch their tents in grassy areas adjacent to the blacktop.

The recreation-oriented lake is approximately 100 yards down a pair of newly-constructed rustic stone and log steps from the camping area. A well-guarded beach is located across the lake. Boat rental and food concessions are nearby.

Funds have been appropriated and plans are now in the design stage for a modern sewage and sanitary system to serve the park. It is expected to be completed within the next two years.

This will include a new well and water distribution system for the campground and a central wash-

house with showers. Pit facilities currently serving the campground will be modernized.

New sanitary facilities and wash-houses will also be built for the popular family cabin area. There are 16 cabins.

Fishing for trout and other cold-water species is popular in the lake. Trout are stocked four or five times a year by the Pennsylvania Fish Commission.

Parker Dam has an excellent nature program under the direction of a park naturalist during summer months. Nature hikes, for people of all ages, are held about five times a week. These hikes cover four major areas and run the gamut from natural to man-made history.

An authentic log slide has been reconstructed on an old tow path in the woods. A nearby kiosk has a display of antique tools and equipment actually used in logging days. Printed brochures tell the history of logging in the area.

There are five major hiking trails through the woods, each averaging a mile or so.

On Friday and Saturday evenings during the summer months, campfire programs are held in an outdoor amphitheater. Campers sit on split log benches to view films and slide shows on conservation and nature which are conducted by the park naturalist.

In the spring high water season, canoeing is popular on the West Branch of the Susquehanna River not far from Parker Dam.

Popular trout streams nearby include Anderson Creek, Bennett Branch and Laurel Run, all near Pennfield, and Medix Run Creek at Medix Run. Forty-two-acre Sabula Lake at DuBois is stocked with largemouth bass, sucker, yellow perch and sunfish.

Pennfield, the nearest town, was once a leading lumber and coal center and was best known for its high grade coking coal. Clearfield about 15 miles south of Parker Dam on Rt. 153, is also on the West Branch of the Susquehanna. Here the Indians had a crossroads town named Chink-lacamoose.

The Clearfield Historic Museum is located in this town. It is open Sundays from 2:00 to 5:00 p.m. and other days by appointment. Clearfield also boasts one of the largest taxidermy plants in Pennsylvania. The Clearfield County fair, held annually in August, is one of the most popular in the Commonwealth.

A few miles south of Parker Dam is beautiful S. B. Elliott State Park. The primitive campground here is used mostly for overflow from Parker Dam or as an overnight stop for travelers on Interstate 80. There are no planned recreational facilities.



When writing the **ANGLER** . . . whether it's a letter to our "LEAKY BOOTS" column or for a subscription . . . **PLEASE TYPE, PRINT, OR WRITE LEGIBLY!** Considerable time is spent each month trying to "decode" names and addresses of our correspondents!

FISHING PARTY

continued from page 7

finding their way shut off would turn and charge back.

"Someone would sight a big pike or 'muskie' coming near the surface and make a splash at him with the pole, but they weren't so easily scared, and would make a rush for an open space between two men, leap across a canoe and away they would go.

"They were hard to stop, for a spear driven into such a big fish would not hold and the motion of the fish through the air was so swift that when hit with a spear the chances were the man would be thrown out of his canoe, or he would break his spear handle.

"When the net had been dragged down near the dam, having about an acre of water enclosed, it was stopped and stones piled on it to keep it in place, then the boss would call out 'all right!'

"You should have seen the fun and excitement at this stage of the game. Two, sometimes three men in each canoe, some standing on the net, some on the bank, others wading right in and picking out the fish. Fish jumping over the rock dam at the lower end, men spearing both in the air and in the water.

"After the fish were all killed they were taken to the gravel bar and there they were sorted, each kind in a heap. Then a committee was appointed to divide them.

"The division usually was by estimating them but sometimes a very large pile had to be counted, one such that I watched them count had five hundred fish in it from one foot to three feet in length.

"The committee made a pile for each man, wrote his name on a paper and placed him by his fish so there was never any trouble over the award.

The pile that fell to my father was of course passed to me, but there were so many and they were so heavy that a neighbor hauled them home for me.

"Pike, salmon and bass were the best fish that we got. There are no salmon in the Allegheny now such as we used to get in those days. Those fish were so heavy bodied with bright scales.

"Then there were the big 'buffalo' suckers with shoulders six inches through. Many perch, spoonbill sturgeon, also rough backed sturgeon. One of this latter kind caught at Tionesta weighed 60 lbs.

"Then a fish that we called a fly-by-night, ran in schools; they were a broad, flat fish with a beautiful colored shine to their scales.

"Two-tined spears were all that were used in those days. When a young man (just an occasional one would do so) would come to a fishing 'bee' with a three-tined spear he would be met with such a shout as 'Hurrah! here he comes with his hay fork!' The real sportsman of those days would not use anything but the two-tined fork. . . ."

A LICENSE FOR BOAT OPERATORS?

continued from page 17

good judgment that of maturity. While at least the latter should accompany the increase in years, this is definitely not guaranteed!

Everyone would agree that if we could reach our objective—that is, to have every boat operator able to produce evidence he has "taken the course"—voluntarily, it would be much preferred to reaching it by compulsory means. I hope that with recent passage of the Federal Boat Safety Act of 1971 with its provision for financial aid to the States in the fields of Education and Enforcement, a really

all-out, expanded effort to encourage boat operators to voluntarily attend a boating safety education class will be tried nation-wide. Hopefully, enough will attend *voluntarily* that the task of reaching the others on a compulsory basis would be a simple matter. But whether it is Education on a *voluntary* or *compulsory* basis, it is much preferred over any *Operator Licensing* system and those who agree should sign up now for the next Boating Safety Education class. If there are none scheduled near you when you can make it, write to BOATS, P.O. Box 1673, Harrisburg, Pa. 17120. We will coordinate with the Auxiliary, the Power Squadron and the Red Cross in an attempt to help you learn the FUN of SAFE BOATING. Only in this way can we give a negative answer to those who see Licensing as a necessary evil.

BEGINNING IN FEBRUARY, BOATING SCHOOLS are scheduled in over 48 locations throughout the Commonwealth. Watch future issues of the **ANGLER** for those scheduled in March, April, and May. This is a three-lesson, six hour course entitled, "Boating Pleasure." It's free and ALL AGE GROUPS are cordially invited.

REGION III (Northeast)

Date and Time

Feb. 4th, 11th & 18th
7:00 to 9:00 PM

Feb. 24th, Mar. 2nd & 9th
7:00 to 9:00 PM

Feb. 1st, 8th & 15th
7:00 to 9:00 PM

Feb. 7th, 14th & 21st
7:00 to 9:00 PM

Feb. 28th, Mar. 6th & 13th
7:00 to 9:00 PM

Feb. 3rd, 10th & 17th
7:00 to 9:00 PM

Feb. 2nd, 9th, & 16th
7:00 to 9:00 PM

Location

Bradford County Courthouse
Towanda, Pa.

Columbia County Courthouse
Bloomsburg, Pa.

Lackawanna County Courthouse
Scranton, Pa.

Pennsylvania National Guard
280 Market St., Kingston, Pa.

Lycoming County Courthouse
Williamsport, Pa.

Susquehanna County Courthouse Annex
Montrose, Pa.

Wyoming County Courthouse
Tunkhannock, Pa.

Date and Time

Feb. 22nd, 29th & Mar. 7th
7:00 to 9:00 PM

Feb. 25th, Mar. 3rd & 10th
7:00 to 9:00 PM

REGION IV (Southeast)

Feb. 4th, 11th & 18th
6:00 to 8:00 PM

Feb. 17th, 14th & Mar. 2nd
7:00 to 9:00 PM

Jan. 31st, Feb. 7th & 14th
7:00 to 9:00 PM

Feb. 4th, 11th & 18th
6:00 to 8:00 PM

Location

Union County Courthouse
Lewisburg, Pa.

Wayne County Courthouse
Honesdale, Pa.

Central Bucks West High School
Doylestown, Pa.

Lancaster YMCA
527 N. Queen St., Lancaster, Pa.

A. D. Eisenhower High School
Markley & Coolridge Blvds., Norristown

Caterpillar Tractor Co. Auditorium
Doylestown, Pa.

ALSO BEGINNING IN FEBRUARY: 8 Week
Feb. 27th
8:00 to 10:00 PM
Coast Guard Auxiliary Boating School
Oakmont Yacht Club
11 Washington Ave., Oakmont, Pa.

A FISHING FEATURE FOR FISHERMEN FROM FISHERMEN

FISH TALES



Fisherman JOHN MORO, W. Hazleton (left), caught this 27 inch walleye while fishing at Lake Wallenpaupack on a beautiful fall day.



KEVIN J. KAE LIN (right), age 12, is dwarfed as he holds his catch of a 29 inch carp caught in the Allegheny River last May. His bait was a doughball.



This 21¼ inch citation size smallmouth bass was landed by JOHN W. DECKON, Pittsburgh, from Pymatuning Lake. He used spinning tackle and a Mepps black fury #3.



CLAUDE SNOEBERGER of Boswell holds the nice largemouth bass he caught from Lake Somerset last June. It measured 21¼ inches and weighed 6 pounds.



BARRY GROH, age 13, (on right) got help from a friend to hold his catch of a 25½ inch, 8½ pound carp caught at Tohickon Creek, Bucks County. The boys live in Quakertown.



Young BROCK McCANDLES caught this crappie near Harris Island. Brock Age 9, lives in Unionville. The crappie measured 14½ inches.



ROBERT LOGAN, above, is justifiably proud of his catch of a 22½ inch walleye caught last June in Pymatuning Lake. Robert is 9 years old and lives in Cransville. To the right BOB MARZANO holds his 31 inch walleye caught between Harris and Whaley Islands.



JACK DUNN (left) of Cumberland, Maryland, holds the 25 inch walleye he caught at Gordon Lake while CAROL MORGAN, 14, of Bethlehem gleefully flaunts her catch of a 31 inch carp surpassing her older brothers.



DOUGLAS WETZEL (left) of Aspers displays his opening day stringer caught from a small stream near Ortanna. Little DAVID TRACY of Brodbeck's (right) holds his big largemouth bass caught last June from Lake Marburg.



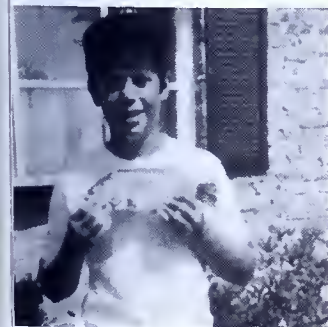
LOUIS GRIST, Bessemer, caught this 35½ inch yellow perch from a quarry in Lawrence County last May. It took nightcrawler.



This 19½ inch lake trout was caught by MICHAEL KEVAK of Dickson City last May at Stern's Lake in Susquehanna County.



NEIL MERENSTEIN, Pittsburgh, holds the 2½ pound bass he caught from a farm pond near Library.



PAUL DRAGOVICH holds his citation size rock bass caught from the Susquehanna River using a Crayfish for bait while JACKIE KNORR of Reading (right) holds her citation size yellow perch caught at Promised Land Lake last May.



ERIC KOPER (left) holds the beauty his father Tony caught—a 20½ inch rainbow trout—while DOUGLAS CULBERTSON (right) also holds a beauty—a 16 inch golden palamino trout—caught at Buffalo Creek.



Leaky Boots

continued from page 3

WHY NO STOCKING?

Dear Sir:

I was told by some local fishermen along Thorn Creek in Butler County that the area above the bridge out of Jefferson Center to the Saxonburg Sewage Plant was not stocked with trout. This has been going on since the accidental pollution of the creek by the sewage plant. When I left the creek on opening day there were many fishermen in the areas mentioned above. If the creek was not stocked in these areas I imagine that these people were disappointed.

What I would like to know is why was this not stocked with trout as it had been before the accidental pollution of the creek. Due to this, other sections of the creek are becoming crowded with the fishermen who normally fish these holes above the bridge I mentioned. I know there is nothing that can be done about this crowding but I would like to see this section of the creek stocked with trout

if possible. Like I said above why was this not stocked with trout?

DENNIS SIMS, Tarentum, Pa.

Dear Mr. Sims:

In reference to your recent letter regarding Thorn Creek, Butler County, the section of stream you mentioned was not stocked by Waterways Patrolman Scobel because he feels that it remains unsafe because of sewage pollution. The section of stream will not be stocked until improvements are made to the Saxonburg Sewage Treatment Plant.

The trout normally allotted to this segment of stream are distributed throughout the remaining approved area and therefore are not lost to local fishermen.

We would recommend that you register a complaint concerning the sewage pollution with Mr. Howard G. Luley, Regional Sanitary Engineer, Pennsylvania Department of Environmental Resources, 300 Liberty Avenue, Pittsburgh, Pennsylvania 15222. Mr. Luley's office is responsible for pollution abatement in the Saxonburg area.

Thank you for your interest in this problem and we can assure you that the section of stream in question will once

again be stocked when the water quality there is improved.

ROBERT J. BIELO,
Former Executive Director
Pennsylvania Fish Commission

THANK YOU!

I would like to thank you for your interest and most of all for the hope and good wishes you sent me in your letter that I would enjoy another season of fishing in good old Pennsylvania, the coming season will be the fifty-first year that I have been fishing the streams in our State and each year I enjoy it better and better and to me the trout are more plentiful each year and with the amount of fishermen becoming larger each year I can only say that the Commission is certainly doing an excellent job and my thanks to all of you, the fishermen of Pennsylvania should be grateful that we have a real Fish Commission.

Respectfully yours,
H. E. DuBROUX, Secretary
Northcentral Division
Pennsylvania Federation
of Sportsmen's Clubs

In order to have some estimate of the number who will be attending the Fish Commission **BOATING COURSES** listed on page 29, it will be greatly appreciated if the form below is completed and forwarded to the Waterways Patrolman **within the COUNTY where you plan to attend**. His name and address are in the back of your Pleasure Boating Requirements pamphlet, or your summary of fishing laws and regulations.

For information on Coast Guard Auxiliary Courses contact any member of the Auxiliary or Lt. Joseph E. Tamalonis, Director Coast Guard Auxiliary, Federal Building, Harrisburg, Pennsylvania. Phone: 717-782-3737

For information on U.S. Power Squadron Courses call this toll free number 800-243-6000.

I plan to attend the Pennsylvania Fish Commission "Boating Pleasure Course" in Region _____ No. _____

Name _____

Address _____

Number of additional people who will accompany me. No. _____

Fishing Outlook

continued from page 4

the hole. The heavy sinker puts a bend in the spring steel and then even the gentle sucking in of the bait by a Perch or Smelt is easily seen. They are "hoisted" in hand over hand and deposited on the ice for quick freeze. A mouth watering meal of Perch filets or deep fried Smelt make all of the discomforts worth while. Fellows out here drill their holes right beside each other and sit facing them. Waterways Patrolmen Ely and Valentine took a head count of fishermen and averaged out the catch for several hundred of them several years ago. With their count of fishermen, cars, and the catch observed, they estimated that 4 tons of fish were tak-

en from Presque Isle Bay that day. That's a lot of fish!

Early in the nineteen fifties the Fish Commission sought to introduce the Smelt to other areas of the state. Both as a forage fish and as a sport fishing species. Those were live trapped and transported from Lake Erie to inland waters but only one other lake saw the Smelt take hold. Harveys Lake in Luzerne County still has a good Smelt population as a result of this original stocking. 658 acres in size, it's deep, with a maximum depth recorded at 106 feet. 95% spring fed, Harveys Lake has just a few tiny brooks emptying into it. The dipping of Smelt in these little tributaries was curtailed in 1971 to allow the Smelt to increase their numbers. W.P. Manhart of Luzerne County says that the young of the

year are showing up in increasing numbers along the shorelines and inside catches of game fishes this fall.

Here in Harveys Lake most fellows fishing for Smelt go out after midnight. Gas lanterns set on the ice or suspended from a pole are standard equipment. Jigging rods using the cut baits or bits of worm are the favorite baits here. Most Smelt are caught from 2 to 20 feet down in waters not exceeding 35 foot in depth. The area off from Hansons Amusement Park and the section between Sunset Beach and Link's Tavern are the hot spots. Perch, Walleye, Trout and Coho are also in Harveys and these are caught regularly through the ice. A good night will see 300 or 400 of the faithful gathered to try their luck on Harveys Lake. Why not join us?

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PENNSYLVANIA

MARCH, 1972

Angler

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Projects? Progress!

Having just gone over about 100 news columns on my having been appointed Executive Director—very few alike—some having dragged out some very old, inconsequential details of obscure biographies that no longer (if ever) apply, I can readily understand that some fishing and boating addicts could understandably wonder what they got! Even with the bewilderment of trying to understand a tidy, but complex new outfit in the first few weeks, I can appreciate your wanting to know some things—my pet projects, the new sense of priorities, the hang-ups.

At the risk of having these thrown back in my face at future dates, I'm going to try to project some prospects, some ideas, some dreams:

First, because this has been a preempting occupation in my former job, I feel a deep sense of concern about pollution control. We worked on the legislation that became the 1970 amendments to the Clean Streams Law—tough, complete and an absolute mandate. How's this for a goal: "not only to prevent further pollution of the waters of the Commonwealth, but also to reclaim and restore to a clean, unpolluted condition every stream in Pennsylvania that is presently polluted"? That's part of Act 222, and—since the Pennsylvania Fish Commission is the only official reporting agency for water pollution for the Department of Environmental Resources—that's a number one priority. We gain, in net miles of clean streams, over 100 miles per year. We will gain more per year as we go. There's no question about it—not just for fishing and boating, or for aesthetic purposes—for bare survival, that's the number one priority. All else is contingent on that.

Opening more municipal authority impoundments to fishing; setting aside some primitive areas for "quality fishing"; pier fishing in most lakes to benefit the senior citizens and the incapacitated; more stream management—and less straight "put-and-take"; fish ladders and anadromous fish runs in the Delaware, Susquehanna and the Potomac drainages—cohos and chinooks for our lakes; hundreds of new miles of canoe trails—thousands of new acres of boating waters—with good access.

Call these ideas and not impossible prospects. These are not new, they have already begun. They will just receive one helluva lot of emphasis.

As for the dreams—let's resolve them into one: an educated public, with a Conservation conscience. Twelve million Pennsylvanians—plus! Turn-over every year! Fishing clinics, boating safety classes—that's just part of it; but if we can get people to try these activities and enjoy them, then they'll come to love them; then they'll want to protect the resources that make them possible.

Reality—347 Fish Commission personnel (haven't met them all yet) who are the most dedicated, unselfish people in the right slots I've ever met!

Did you notice?—no hang-ups!

Impossible dreams?—Piece of cake!

Executive Director
RALPH W. ABELE



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Franklin—Dave Bierly

Harrisburg—Neil Shea

Huntingdon—Wayne Weigle, Acting

State Headquarters

Offices: 3532 Walnut Street, Progress

Mailing Address: P. O. Box 1673

Harrisburg, Pa. 17120 Phone: 717-787-7394

Regional Headquarters—Waterways Bureau

REGION I—1293 Otter St., Franklin 16323

Phone: 814-437-5774)

REGION II—R.D. 2, Somerset 15501 Phone:

4-445-8974)

REGION III—Box 88, Sweet Valley 18656

Phone: 717-477-5717)

REGION IV—R.D. 2, Annville 17003 (Phone:

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PENNSYLVANIA

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Volume 41/Number 3

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STATEWIDE with the EDITOR

Last July 14 my brother-in-law and I were in a twelve foot boat in the middle of Lake Pymatuning. The water was rough but I did not worry as I've been in all kinds of weather and never capsized in 40 years.

But at 3:30 P.M. my brother-in-law and I *were in the water*. We were in for about three hours and there was not a boat in sight. We had life preservers in the boat but the rough water had carried them out of reach (from now on I will wear them at all times.) I had thought you could grab them in the water—but you can't in rough water.

We stayed with the boat but it was hard to keep it in one position as it kept rolling around. Finally I unhitched the motor and let it drop in the lake.

Eventually I saw a movement on shore. I kept my eye on it and when it moved again I knew there was somebody there.

Both of us yelled at the top of our voices at the same time. He heard us and ran for help. His name was Mr. Hardget and he and his wife were visiting from Meadville. He found Mr. & Mrs. David Nye from Ellwood City who were camping in the area.

When we floated to shore we landed beside a wall of rocks. The water was deep and Mr. Nye and Mr. Hardget put life preservers over their clothes and pulled us out up over the rocks. We were so weak we couldn't have made it if it weren't for those two men!

If you print this story it might make other boaters think more seriously about their life preservers—and wear them in rough water at least.

I AM GLAD TO BE ALIVE!

JAMES R. SKEES, Pittsburgh

You'll never know Jim, just how happy we are to hear from you! We hope that by giving your letter the special attention it deserves, others may profit from your experience. We admire your courage in sharing this with our readers.

STATEWIDE, the fish trucks are rolling again . . . at first glance it may seem untimely to devote more than a few cursory remarks to safety afloat so early in the year. But when you consider that go lakes are now receiving their pre-season compliments of trout, it follows that these same lakes on OPENING DAY are going to resemble, in many ways, the Normandy invasion and thousands of PENNSYLVANIA ANGLERS will be fishing FROM BOATS. Jim Skee was bushed after three hours in the water IN MID JULY! I challenge you to roll up your sleeve, thrust your arm into April's icy water, and hold it there . . . three minutes! I venture to say that you'll never stand up (in a boat) to cast again!

SHORE FISHERMEN need concern themselves with little more than taking

care not to wade off a ledge into deep water . . . or perhaps trip or slip off a dock . . . but seldom do they incur the risks of the boat fisherman. He fishes deeper water generally—and most of the time he's much farther from shore. Larger boats in on way guarantee any measure of immunity from an un-scheduled dunking—folks have been known to fall overboard, but too often it's the smaller boat that figures in capsizings and drownings. In Jim Skees' case, there were only two men in a twelve foot outboard . . . certainly not a case of overloading . . . still it capsized. The risk of capsizing is greatly increased when additional passengers, moving and shifting about, crowd the smaller boats.

An additional hazard that goes hand in hand with overloading is a shortage of PERSONAL FLOTATION DEVICES . . . call them LIFESAVING DEVICES if you wish, in either case we hope the "PERSONAL/LIFESAVING" connotation is perfectly clear. Unfortunately there are many who apparently aren't getting the message . . . in 1971 alone, Pennsylvania's WATERWAYS PATROLMEN (including deputies) cited 1,112 boat op-

erators for violations relating to personal flotation devices! This figure includes unserviceable (or not Coast Guard approved) devices, insufficient numbers aboard . . . or worse, NONE.

PAGE 29 lists dates and locations where the FISH COMMISSION'S "BOATING PLEASURE" courses are being held . . . right now, STATEWIDE, there's one scheduled within easy driving distance, wherever you live. If not, WRITE US! You'll be surprised what even you can learn. These sessions are geared for all age levels and will make you A BETTER BOATER!

DON'T PANIC—if you have subscribed to the ANGLER and your first copy seems a long time in coming. **SUBSCRIPTIONS RECEIVED AFTER THE 5TH OF EACH MONTH WILL BEGIN WITH THE SECOND MONTH FOLLOWING.** However, if more than 3 months have gone by since you placed your order, wait no longer!

WRITE:

PENNSYLVANIA FISH COMMISSION
PENNSYLVANIA ANGLER "CIRCULATION"
P.O. box 1673
HARRISBURG, PENNSYLVANIA 17120

We need your address and ZIPCODE
PLEASE PRINT!



NO MORE NATIVES?

I really enjoyed the story about natural trout reproduction in the Angler. The author of these stories spoke of preserving our native trout fisheries.

This is one way in which the Fish Commission is covering up the devastating destruction it is creating at the head of Big Spring, Cumberland County.

When you announce the opening of your new hatchery you most likely will not show the other side of the coin. Of course most fishermen will not care to hear about the rape of the Big Spring. All that they know is that they will get "more trout" so they can kill another "limit" or so. However, for instance what about the non-resident fisherman who drives 200 miles to fish the famous Big Spring, and finds it muddy and oil-streaked! Big Spring?!! Muddy?!! Oily?!! Yes, thanks to the Fish Commission! What about the wonderful native brookies of Big Spring, the fish that Theodore Gordon wrote about? They now face the bleakest future of any in the State!

So the Fish Commission wants to "Go Native". From what I have seen it has no regard for native fisheries! It has created a massive artificial fish production facility at the expense of a beautiful native trout stream, the *real* thing!

It is too late to reverse the tragic and disgusting destruction of Big Spring, but let this be the last time we misguided fishermen let the Fish Commission use our money to destroy our good fishing!

SCOTT ECKERT, Carlisle, Pa.

I was glad to hear that you enjoyed our series on natural trout reproduction. I must confess, however, I am very disappointed with your appraisal of the current conditions on Big Spring Creek.

You "are" correct in stating that there has been at least one period of very turbid or muddy water in the headwaters of Big Spring. Our staff has conducted two intensive preliminary surveys of fish and

aquatic life in this stream; one in October 1970, the other in April 1971. Sometime prior to our first survey, we visited Big Spring and found very muddy water being pumped from the hatchery construction site to a point just downstream from the spring. The stream was very turbid and needless to say we were quite disturbed over the situation. The matter was called to the attention of Mr. Edward Miller, Director of the Bureau of Fisheries and Engineering, and Mr. Delano Graff, Assistant Chief of the Division of Fisheries. The contractor was immediately notified to stop this pumping and he complied.

Now I am not going to try to tell you that no turbid water entered Big Spring Creek since this incident, because a certain amount obviously would do so where the ground surface is disturbed. During our April survey, however, the upper portion of the stream looked good. As a matter of fact, we observed an unbelievable number of young-of-the-year brook trout fingerlings which hatched sometime during February or early March. This evidence is hardly consistent with the charges you have made.

As to the oil streaking you mention, I do not doubt that there may have been some from the heavy equipment being used, although I have not observed it on several visits to the area.

The discharge or addition of any material into Big Spring Creek, which can remotely be termed a "pollutant," is regrettable. We recognize this fact and have tried harder than you realize to minimize any such pollution. We believe that any "pollution" caused will not have long term effects on the fishery or the stream's capacity to support natural reproduction. This especially applies to the upper portion where most of the natural reproduction presently occurs.



In your letter you did not mention the fact that much of the middle and lower portion of Big Spring Creek has been adversely affected by "private" interests prior to the Fish Commission's Big Spring project. The construction of two private hatcheries "directly on the stream," (not to mention the dams involved,) has had very serious long term effects. These effects in-

clude the loss of trout habitat, actual loss of fishable water, elevation of water temperature (which is very significant in trout reproduction) among other things. These are some of the "real factors" which have tended to limit natural reproduction in the middle and lower portions of the stream.

We have purchased the two old hatcheries at considerable expense and the section of stream from the spring downstream to the vicinity of the Presbyterian Home. We have very elaborate stream improvement plans for this section, which involve the elimination of the old hatcheries and the "eventual return of the stream to a more natural channel" containing various stream improvement devices. I must advise you, however, that you will observe a considerable amount of turbid water in the stream during this project. I am presently unaware of its starting date, but my guess is that it will take place during 1972.

Although I disagree with you on several of the points you made in your letter, we welcome your criticism and I personally admire you for frankly stating your views. I believe, however, that when we have finished our projects on Big Spring Creek, you will then agree that we actually did the opposite of what you have accused us of doing.

ROBERT B. HESSER, Acting Chief
Management Section

LIKES STILL-FISHING

Please send me a copy of the "Fishermans Guide Booklet" mentioned in Leaky Boots in the December issue of the Angler.

We have subscribed to the Angler for some time and enjoy every page. More articles on still-fishing would be appreciated.

KENNETH L. ALLARD, Warren, Ohio

Ed. note: We'll try our best Ken!

A CO-OP FAN

I am writing to tell you how much I enjoy reading the Angler. I especially like reading the monthly feature about cooperative nursery projects by Mr. Bill Porter. I am a member of a fishing club. I enjoy these articles very much and like learning of the different clubs that have taken a part in this program. I feel every angler will have more enjoyment fishing because of these programs.

BRUCE BILLINGS, Lake City

Ed. note: Despite our monthly CO-OP column, I believe the efforts of these dedicated, hard-working "private citizens" too often go unnoticed—we're extremely pleased you're getting the "picture."

The warming winds and gentle rains of March tend to awaken the plants and animals from what always seems to have been the longest of winters. The sun seems warmer . . . and there's more of it. It's time to go fishing; but where? Why not try one of the Fish For Fun stretches? They're well scattered over the state—readily accessible, have a good supply of trout and offer quite a challenge to any fisherman.



FISHING OUTLOOK

By-- Stan Paulakovich

Back in 1954 the Federal Fish and Wildlife service inaugurated the first fish for fun streams anywhere in the United States. At that time the Bradley Fork in North Carolina and the West Prong of the Pigeon River in Tennessee were opened to fish for funners on a part season basis. Pennsylvania began its program in April of 1958 when the Left Branch of Young Womans Creek was opened to fish for fun anglers. This small freestone stream in Clinton County has since been designated open fishing. Today we have sections of 9 streams designated as fish for fun areas where fishing is permitted with flies or streamers only. In addition, we have one fish for fun area where fishing with spinners is permitted—along with flies and streamers. These areas are open all year long.

All of these fish for fun areas are stocked early in March, as soon as they are free of ice and the roads are clear. Again just before the opening of the regular Trout season they receive another stocking. They are stocked periodically after that up until October. Before each summer holiday they get an additional stocking in anticipation of the heavy fishing pressure. These are necessary because there is no way to prevent fish migration—the fish are free to come and go as they please.

Most heavily fished and probably the most noted of our fish for fun streams is Spring Creek. The famed Fishermen's Paradise covers .6 of a mile of Spring Creek in Centre County. Generally high and slightly discolored during March, best bets are streamers and sucker spawn flies. This fly is tied by taking a single strand of wool and forming loops on the shank of the hook in rows. When wet this resembles the chain-like roe of the Sucker. Pale yellow which most

closely matches the natural spawn and light pink are the colors that produce best.

Over the last few years W. P. Antolosky has been transplanting some of the May flies and Stone flies, both nymphs and adults into Spring Creek from other local waters. These had been almost wiped out by pollutions. Now they are showing signs of taking a hold again. Hopefully, some day they can be brought back to the original populations. A good week-end when the weather is nice will see between 200 to 300 fishermen at the Paradise. They come from all over Pennsylvania and a good number of out-of-staters will be on hand.

The project on Yellow Breeches Creek in Cumberland County covers one mile. One of the top trout streams in Pennsylvania it has a good quantity and variety of insect life. It ranges between 40 and 50 feet wide and wading is permitted. It will get muddy but clears up fairly well after even the heaviest of rains. Like most other

trout streams it will be high and slightly discolored now. These are perfect conditions for wet fly and streamer fishing. Quill bodied flies and nymphs always seem to work well here early in the year.

Over in Elk County .5 of a mile of the West Branch of the Clarion River is designated as a fish for fun area. Wide, 50 to 75 feet, it has plenty of aquatic life with good hatches coming off from mid April to September. This stretch has been opened through the courtesy of Texas Gulf Sulphur Co. and is open for fishing from the east shore only. Plenty of room here for good fly casting. The muddler minnow over the past few years has been a consistent fish getter. The West Branch draws most of its fishermen from the Clarion—Du-bois area.

Falling Springs Creek in Franklin county is a relatively small limestone stream. It has an unusually high population of aquatic insects. Among the

continued on page 29



Lone angler enjoys the solitude of late winter trout fishing along the Little Lehigh.



NOW WE'VE SEEN *Everything!*



You've guessed it—that "chopper" is stocking fish! The helicopter in the photo above was engaged by the Bureau of Forestry during last spring's forest fire alert. On a damp, misty day when a forest fire seemed unlikely, the 'copter was used to stock the G.B. Stevenson Dam with rainbow trout. Moving along at about 20 knots (the bucket a mere 15 feet above the water) it was possible to make a 300 foot spread on each pass. Talk about scattered fish—and no casualties!

In the photo, left, the pilot has just dropped the bucket into the lake to be filled. A simple trap door allows the bucket to fill and closes again when the bucket is lifted. A motor winch on the 'copter's underside is controlled by the pilot and opens the trap for the drop. Below, Deputy Gene Swank loads fish into the bucket as aircraft hovers near Federal fish truck.

Photos: Cloyd Hollen





RIVERS

by Robert J. Perry

WATERWAYS PATROLMAN

Columbia & Montour Counties

"Look at this one, five pounds if it's an inch! That's six today over twenty inches . . . and I thought fishing was good yesterday!" Believe it or not, this is "run of the mill" conversation on that stretch of the Susquehanna River which lies between Shickshinny on the North and Sunbury to the South, especially during the months of November and December. The reason? Well, it's the case of "the people versus Water," if you will.

There was a time when many considered that the most useful function of the river was to carry away wastes in the form of sewage, mine drainage, industrial discharges, etc. The river transported these wastes, but water quality deteriorated.

Others viewed the river merely as a barrier which made expensive bridges necessary . . . still others just ignored it. There were of course those who were concerned with conservation . . . but *they* found themselves outnumbered.

One day the river began to fight back. At first this was noticeable only by small patches of aquatic weeds . . . later, hatches of walleye, rock bass, small-mouth bass, and other game fish began to appear along the shores. Forage fish, in the tens of thousands, were in evidence. Everyone rallies around the underdog . . . and this valiant fight did not go unnoticed.

Underground flooding caused many mines to shut down. The advent of oil and gas heating saw heavy mine drainage diminish . . . new sewage treatment plants were built . . . existing plants upgraded. At

◀ The beautiful Susquehanna River of which Bob Perry writes is pictured here at "Half Falls." . . .

◆ ◆ are like

People

this point the river gained its second wind and began to provide catchable sized walleye and other gamefish.

Industry was on its way toward recognizing and meeting its obligation to the environment. *Again* the river responded; evidenced by catches of muskellunge in excess of 40 inches and twenty pounds. This great game fish stocked by the Fish Commission was returning interest on the investment.

"People" were the cause of the problem, and "people" have begun the cure, but the bill is not yet paid. As the fishing improved, fishermen were drawn to the area to once more reap the harvest that nature was to provide.

This true tale holds promise and hope, but the Battle of the River is only partially won. The heavy artillery still beleagues this river in the form of mine drainage, untreated (or poorly treated) wastes, and other harmful drainages from both urban and rural sources.

This particular section of a great river has shown what can be done with the help of people. And while this story cannot yet be written about many water areas, it is a success story that begins to put people in a favorable light with relation to their environment. It would be my pleasure to tell this same story over and over again . . . with a new water area each time!

The case of "The People Versus Water" may yet be dismissed for lack of pollution, and we'll all have time for some serious fishing. Why not "Join the Pennsylvania Fish Commission in the Fight For Clean Water?"

. . . quite a few miles downstream. The walleye, nicknamed the "Susquehanna Salmon," abounds here too.

M A R C H - 1 9 7 2



Were you able to identify
each of the trout on the cover?
They're RAINBOWS—all of them!

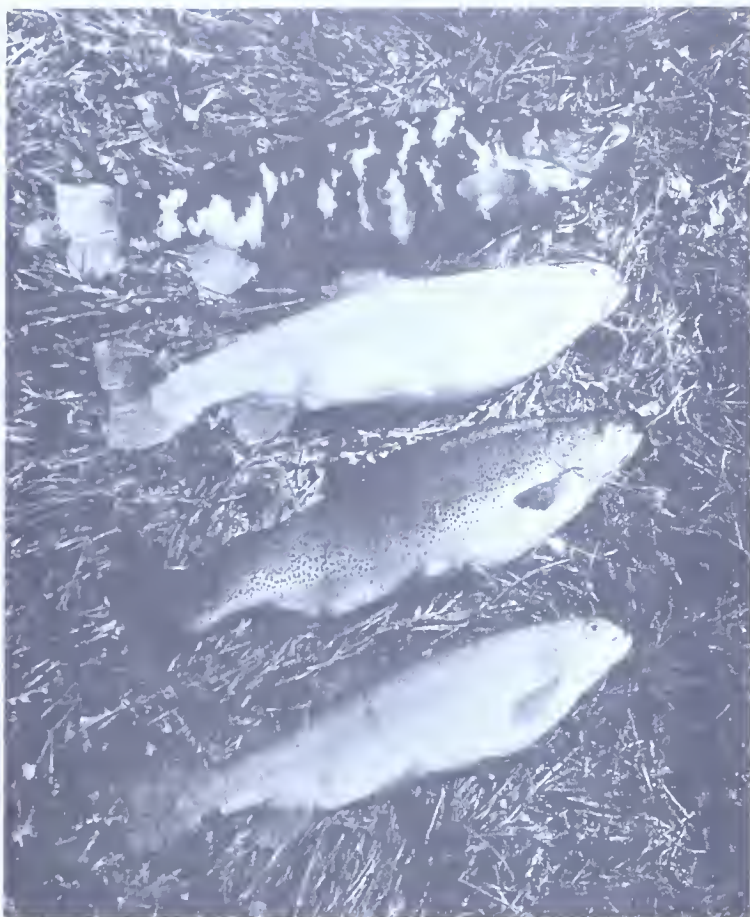


Figure 1. Color phases in rainbow trout. Top to bottom: (1) an infrequent and unusual chimera possessing normal and golden tissue; (2) golden; (3) normal; (4) palomino. (Ed. note: the four beautiful trout shown here, and on the cover, were photographed by the Editor while anesthetized. They were returned to the water with Dr. Wright's "loving care" and are "alive and well" today.)

In 1967 a new rainbow trout strain was introduced into some of the trout waters of Pennsylvania as a novelty. This was the *PALOMINO* which has gained enough popularity among fishermen that over 20,000 will be planted by the Pennsylvania Fish Commission in the current stocking season. The fish was so named because of the similarity of its color pattern to that of the palomino horse. Little did biologists at Benner Spring Fish Research Station know how prophetic this name would be when it was chosen on the basis of color alone. It turns out that this is a color phase in rainbow trout which behaves in its inheritance very similarly to the inheritance of palomino coat color in horses.

Neither palomino trout nor palomino horses breed true for color—they are both genetically hybrid or heterozygous for a gene causing *color dilution*. Generally, when palomino horses are mated, they produce chestnut, palomino or cremello (white with colored eyes) color types in a rather precise genetic ratio; when palomino trout are mated, they produce normal, palomino, or golden types in the same genetic ratio. The latter is explained in detail in a section below.

THE PALOMINO RAINBOW TROUT

by James E. Wright, Jr.

BACKGROUND

The introduction of palomino into Pennsylvania had its inception in a cooperative study among the author and former biologist Keen Buss at the Benner Spring Station and biologist Harvey Beall and his colleagues of the West Virginia Conservation Department. It was our aim to study the inheritance of the color phase known as the golden rainbow, popularized in 1963 in West Virginia as that state's "West Virginia Centennial Golden Trout."

The goldens of West Virginia are exactly as the name implies—a rich golden color with the rainbow stripe along their sides, but with dark eye color which distinguishes them from the pink-eyed albino rainbow. (See the second fish from the top in Figure 1.) The pure strain of goldens had come from a *single female* spawned in the Fall of 1954 and whose body was a mosaic of golden and normally pigmented tissue similar to that shown at the top of Figure 1. Her sex cells were also apparently genetically mosaic for she produced several hundred light-colored offspring which we now know to have been palominos since she had been mated to a normally pigmented male.

About the author: Dr. Wright, currently Professor of Genetics at the Pennsylvania State University, has been associated with the Pennsylvania Fish Commission's Benner Spring Fish Research Station (as a consulting geneticist) since 1951. His work at the campus is supported by grants from the National Science Foundation and under his guidance, his students have been able to engage in active cooperative research with the Pennsylvania Fish Commission, utilizing the facilities at Benner Spring. His continuing work in fundamental genetics is aimed at the breeding of superior strains in trout. We hope to hear more from Dr. Wright in this respect in the not too distant future.

Selective breeding among subsequent generations produced the true-breeding goldens. (For a more complete account of the goldens of West Virginia, one may see an article by Beall in the April, 1963 issue of *West Virginia Conservation Magazine*, one by I. B. Anthony in the January-February, 1967 issue of *Trout*, the official publication of Trout Unlimited, or one by F. H. Clark in the January-February, 1970 issue of the *Journal of Heredity*.)

The accident of nature, or gene mutation, which gave rise to the female described above apparently has occurred a number of times for this golden strain, along with its related palomino color phase, is found in public agency and commercial hatcheries in a number of states of the United States and in Japan. This golden mutant of rainbows (*Salmo gairdneri*) is distinct from the California golden (*Salmo aquabonita*).

Eggs and sperm were stripped from a pure strain of goldens at the Petersburg, West Virginia Hatchery and transported under refrigeration to Benner Spring Fish Research Station in September, 1965 and used in crosses with sperm or eggs of normally pigmented strains of rainbows maintained there. Nothing unusual was noted about the fry that hatched until they were several months old. Then it could be noted that they were much lighter than normal rainbows but darker than the pure strain of goldens; indeed, they were intermediate between the two. As they grew older, this intermediate color phase became more discernible and the basis for it was found to be an intermediate number of melanophores (bodies in the fish skin which contain black pigment, or melanin)—intermediate between the high number found in normally pigmented rainbows and the absence of melanophores in the golden mutant. (Contrast the palomino at the bottom of Figure 1 with the normal just above it and with the golden just above it.)

Eggs of pure goldens were again obtained in 1966 and used in backcrosses with sperm from the precocious males among the first generation intermediate (palomino) progeny. In turn, the latter were allowed to mature and crosses subsequently made between the palomino brothers and sisters. From such crosses emerged results which permit the description below of the definitive inheritance pattern of these color phases. In the meantime, several thousand excess progeny became available for the initial selective stocking of palominos in 1967 and in subsequent

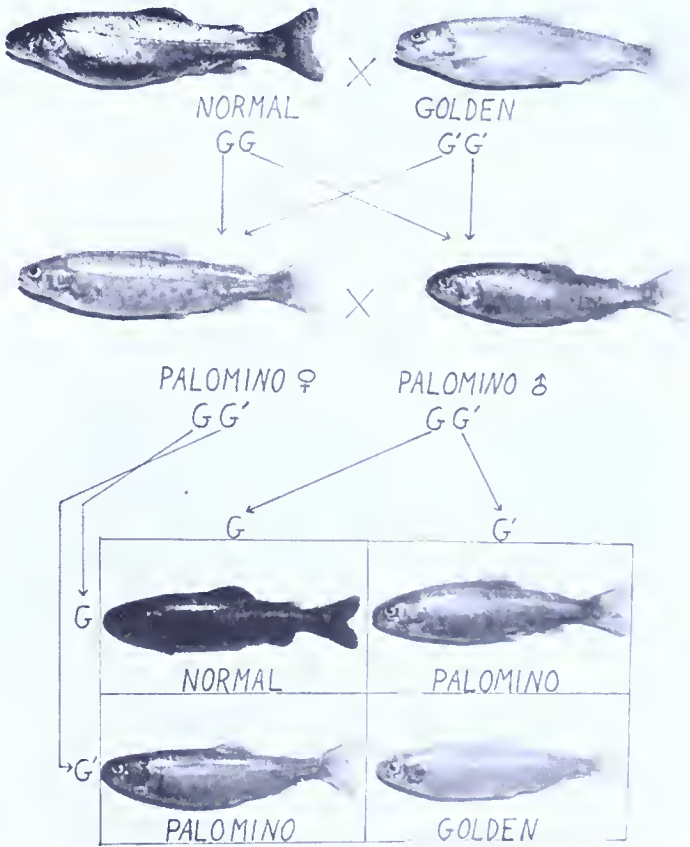
years. It often happens that when unrelated strains of animals or plants are crossbred, that progeny show the phenomenon heterosis or hybrid vigor. So it was that palominos coming from crosses of unrelated West Virginia and Pennsylvania strains showed hybrid vigor in size; they were about 20% larger than progeny of comparable age coming from either of the parental strains. Thus an added advantage was gained not only in the size of this novelty fish but in an added dimension in the breeding of normally pigmented rainbows at Benner Spring.

INHERITANCE

The pattern of inheritance of the rainbow trout color phases is presented in chart form in Figure 2. When a normally pigmented male or female is mated to a golden colored female or male, the first filial generation (F₁) offspring are all intermediate or palominos. When two of these palominos are mated, they produce numbers of F₂ offspring, ¼ of which are normally pigmented; ½ of which are palomino or intermediate; and ¼ of which are golden. In one actual case two palominos were crossed and 361 offspring counted: 93 were normally pigmented, 188 were palomino, and 80 were golden. These observed numbers fit very well the theoretical 90:180:90 expected in 360 offspring segregating in a ¼:½:¼ ratio. Geneticists call this pattern of inheritance a case of lack of dominance (or intermediate inheritance) and monohybrid inheritance—monohybrid because it indicates that only one gene existing in two alternative states (or alleles) is responsible for the color differences.

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Figure 2. The inheritance of palomino and golden colors in rainbow trout. (Explanation in text.)



LET'S CHANGE

Pennsylvania Motor Boat Law (Act No. 400) was signed by Governor Scranton on 14 August 1963 and became effective the first day of the following February. It has served well and is a credit to those who worked so hard to get it enacted. Reviewing the laws of other States and knowing of some of the difficulties of their State Boating Law Administrators because of how their laws are written, I am very much aware of how comprehensive, but yet flexible, Pennsylvania's laws governing recreational boating are. Still, as most laws are, it was a compromise bill and like all laws written by men, it can be improved. The need for some of the changes has become apparent after its 8 years of operation; others as a result of enactment of the Federal Boat Safety Act of 1971 which repealed the Federal Boating Act of 1958 (but largely incorporates its substance) and amended the Motorboat Act of 1940 to give a single comprehensive Act dealing with the subject of safety for boats used principally for other than commercial use.

There are still other changes that should be made because of administrative changes (or to eliminate

only in seeing them equipped and operated in the safest manner.

2. *Definition of "Motorboat."* Presently a large loophole exists for owners of large vessels. They can have their vessels—some as small as 26 feet in length—documented by the U.S. Coast Guard at no cost and escape payment of the \$6.00 registration fee while



"We are concerned only in seeing them equipped and operated in the safest manner."

repetition) and to otherwise improve the wording. These, however, are *technical only* and, "*do not affect the substance of the law.*" Only those changes which would have a substantive effect are considered here. Most of them were incorporated into HB 1496. Proposed improvements in that Bill are included here.

1. *Change in title of Act.* Present law provides for the *registration* and *regulation* of motor boats only. The language of the law permits extension of this regulation to sailboats and hence requirements as to life saving devices, lights and operating rules are enforceable aboard those craft but not aboard foot and hand-propelled craft—a class of vessels specifically exempt from all regulation because of the way "vessel" is defined.

We propose to change the title to make the Act provide for the *registration* of *motorboats* and the *regulation* of other vessels. Note, this does *NOT* call for registration of other vessels; we are concerned

continuing to enjoy Commonwealth facilities and services funded by fees collected from the owners of smaller vessels.

We propose to close this loophole. To pacify those who accuse us of attempting a "power grab" and desirous of registering sea-going ships, even the Q.E.II, we specify that we are concerned only with motorboats used primarily for recreational purposes. And, of course, we don't mean cruising to the Mediterranean aboard a luxury liner!

3. *Definition of "vessel."* As noted above, foot and hand propelled craft are exempt from all the safety requirements of Act 400. Statistics show each year that most of our boating fatalities involve this type craft for which no life saving devices are legally required (As of mid-December, 1971 14 of the 26 fatalities—54%—were from boats with no legal requirements for equipment designed to save life!), and yet we have been unable to get favorable action on this

THE MOTORBOAT LAWS

in Pennsylvania

by Capt. C. E. Leising, USCG Ret.
Director, Bureau of Waterways

change although it has been requested annually since at least as far back as 1968. Here again those opposed to this change confuse the issue with charges of an attempt to grab power!

This point may well become moot because the newly formed Boating Safety Advisory Council authorized under the Federal Boat Safety Act of 1971 is about to advise issuance of a Federal regulation requiring an approved life saving device for each person aboard boats propelled by oars, paddles, sails, poles, or by another vessel. Unless Pennsylvania law is amended to conform with such major federal requirements, we will risk not having our numbering system federally approved and hence jeopardize our eligibility to federal funds which will become available. But even worse—each time you venture onto federal waters from waters which are wholly within the jurisdiction of the Commonwealth, or you go into another State—you will have at least TWO SETS OF RULES TO CONTEND WITH!

4. *Certificate of number for rented vessels.* We propose to make it unnecessary for you to carry the Registration Certificate on board, if you are leasing or renting a boat less than 26 feet in length for non-commercial use of less than 24 hours; the boat's owner would retain the certificate on shore. This provision is in the Federal Boat Safety Act.

5. *Reciprocity between States.* Present law is unique among States in that Pennsylvania accords to boat owners in New Jersey or Pennsylvania who choose to register their boats in New Jersey the privilege of using Pennsylvania facilities and services for an entire season without contributing to our Boating Fund. We are the only State that does so.

We contend that 60 days as provided for in the new Federal Act is a sufficient time for the transient boater, or a newly relocated one, to enjoy Pennsylvania waterways without obtaining Pennsylvania registration. Because of the wording in Section 3F(a), a New Jersey or Pennsylvania boat owner regularly using our facilities on the Delaware River has 120 days during which we will honor New Jersey registration. This is practically the entire season for most boat owners in New Jersey or Pennsylvania. *We love our neighbors and we welcome visitors*, but we see

no reason for this special treatment. Boatmen are required by law to be registered in the State of *principal use*.

6. *Liability of livery operator or owner.* Present law makes the owner of a *motorboat* or a livery operator who rents a *motorboat* responsible to see the boat legally equipped when furnished to the user. We propose to extend this responsibility to the owner or rentor of any type craft.

7. *Boating accident reports.* Present law requires these only from *motorboat* operators or owners. We propose to protect those who rent other type craft in the same manner by requiring owners or rentors to properly equip those boats also. We also propose to make submission of reports in duplicate unnecessary; a single copy will suffice.

8. *Authority to arrest.* Presently the law permits our Waterways Patrolmen to act against only those violations which they witness; the law gives no authority to act upon a citizen's complaint even though that citizen would be willing to testify in court. This is a defect we wish to correct. Also our enforcement personnel can only issue a summons; we wish to give them authority also to arrest where warranted. This would not only be a useful enforcement procedure but would often be a convenience to a violator who might prefer to go then before the

continued on page 32

Proposed changes would make it unnecessary to carry the Registration certificate on board small recreational craft when rented for less than 24 hours.



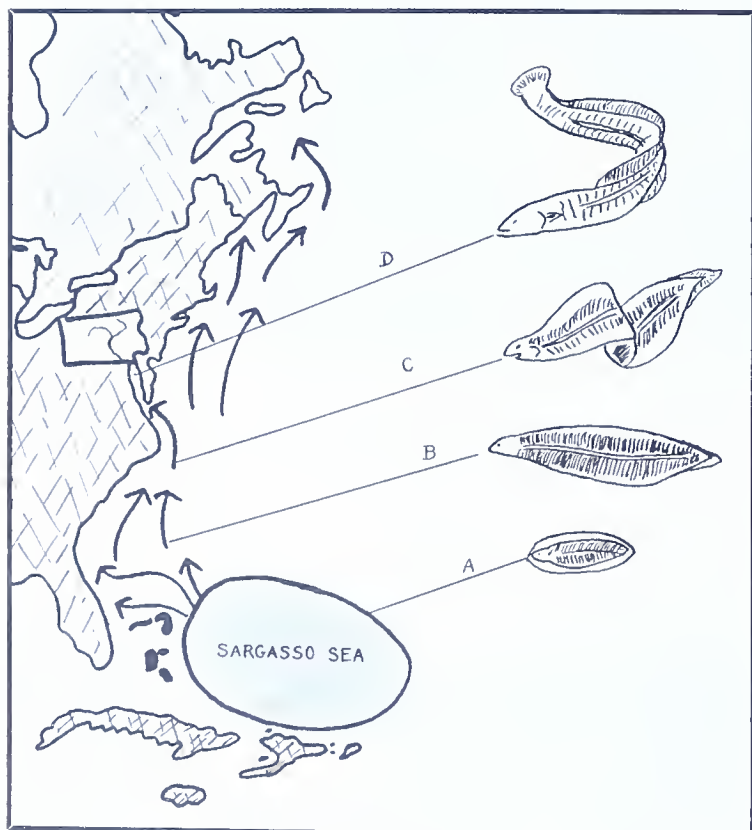
Probably every Pennsylvania angler is familiar with the Pacific salmon's arduous spawning run and their ultimate death in the same rocky stream in which they were born. Few, however, know about the equally amazing journey of the American eel which inhabits the lakes, ponds, streams and rivers of Eastern North America.

The American eel, known scientifically as *Anguilla rostrata*, is a catadromous fish that migrates from fresh water to the sea to spawn. Pennsylvania also has an anadromous fish in the shad of our Susquehanna and Delaware Rivers. The shad spends its life in the sea and moves to fresh water to spawn.

LONG-TIME MYSTERY

For centuries, misconceptions prevailed; fishermen caught baby eels and yet no egg-bearing adults had ever been recorded. Each year young appeared and adults disappeared. Some thought that baby eels spontaneously grew from horsehairs which fell into the water. Others imagined that pieces of the adults regenerated themselves from bits of skin and flesh lost while swimming along stony river bottoms. With the invention of the microscope, slender parasites discovered in the bodies of fish were thought to be immature eels.

Not until the early 1920's did the threads of confusion surrounding the mysterious eels begin to become unraveled. Johannes Schmidt, a Danish biol-



Scientists have learned much about eels by catching and examining them at various points in their migratory route. After hatching in early spring, the quarter-inch larvae (A) begin their migration toward the North American coast. Enroute, they grow into transparent "glass eels" and begin to elongate (B&C). In about a year, they have developed into three-inch "elvers," closely resembling the adults (D). The females are now ready to travel upstream and the males will remain along the coastline in the salty waters.

The Incredible EEL

by Tom Fegely

ogist who had crisscrossed the Atlantic for nearly two decades in search of the birthplace of the European eel, discovered their breeding grounds in the Sargasso Sea (a huge area of floating seaweed southeast of Bermuda and northeast of Puerto Rico). Reasoning that young eels would be smaller as he backtracked their route to the area in which they were born, Schmidt began his tireless search. With the discovery that the warm waters of the Sargasso Sea was the birthplace of the European eel, Schmidt also established that the American species spawned in the same region.

ANNUAL MIGRATION

Each autumn, thousands of female eels from streams and rivers all over Pennsylvania take on a shiny black color. At this stage they are known as "silver eels." During their 7 to 15 years in fresh water they appear yellowish-green to dark gray, fading to a dirty white beneath. Besides the pre-migratory color change, the skin becomes thicker and fatter and the eyes enlarge and acquire golden pigments as the ovaries begin to develop. After living a life of gluttony, the mature eels cease feeding as they begin their downstream journey. Arriving at the bays and estuaries, they are joined by the males which have been living in the brackish water. Together they begin the long trek to their birthplace among the weed infested calm of the Sargasso Sea.

MILLIONS OF EGGS LAID

Upon arrival at the breeding ground, the American eels are joined by their European cousins. Differing



Only the female eel lives in the waters of Pennsylvania. The males remain in the bays and estuaries. During the winter, eels will burrow beneath mud and sand for protection. At other times they can burrow beneath the lake or river bottom with amazing speed to lie in wait for an unsuspecting minnow.

mainly in the number of vertebrae (the European species has 115 while the American eels have 107), the spawning area of the two species overlap. Each female lays several million pinhead sized, colorless eggs at depths of up to 1000 feet or more. After fertilization by the male it is believed that both adults die, leaving behind a myriad of submerged eggs.

In February the eggs begin to hatch. Transparent, leaf-shaped larvae called "glass eels" emerge and undulate their way to the surface. There they begin the slow trip toward their destinations. Drifting eastward with the Gulf stream, the European eels continue a three year, 3000 mile journey while the American eels drift westward toward the coastline of the United States which is reached in about a year. During this time they grow from their microscopic beginnings to about three inches in length.

CHANGE TO "ELVERS"

Those that survive the dangers of the sea change into the "elver" stage upon reaching their home shores. By this time the elvers have developed thicker bodies and more closely resemble the adults. Taking on a darker color across the back, the elvers must now contend with bass, trout, kingfishers, herons and

older eels which prey upon them as they travel en-mass upstream. Eel migrations in the Susquehanna were halted with the construction of dams, consequently preventing young eels from entering the tributaries feeding that river. Transfer of baby eels by the Pennsylvania Fish Commission to points above the dam, however, has restored the eel to its former habitat. Considerations will also have to be made in the proposed Tocks Island Dam to be constructed as part of the Delaware Water Gap National Recreation Area.

Only the females venture into fresh water. The males stay in the bays and coastal waters, feeding ravenously, and meet the females upon maturity for their return trip to the tropical sea.

CAN TRAVEL ON LAND

Eels have been observed leaving their watery home and slithering across swamps, marshes and dew-covered grass to reach a lake or pond. The mucous coating of the skin and their snake-like actions enable them to move swiftly across land, providing that they do not become stranded on a dry knoll or rocky outcrop.

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*If you have more time on your hands —
than money in your pocket . . .*

TRY

"Tackle Tinkering"

by Don Neal

Back in the Great Depression days we could buy a dry fly from local fly tyers for ten cents . . . but none of us had the dime! So we wrapped substitutes on penny hooks and went out to beat local trout streams to a white froth—doing the best we could with the makeshifts.

Thus was born a practice which over the years has provided many of we oldtimers with the pleasures that can be realized from creating and fashioning with your own hands the lures used to fool the fishes. In fact, creating and fashioning your own lures—wet and dry flies, casting plugs, or spinning lures—adds an additional facet to the sport of fishing no angler who buys the "ready mades" can ever expect to enjoy.

While my fly tying experiences predate the depression years considerably, and for years occupied most of my interest in homemade fish foolers, an addiction to the spinning rod, especially the ultra-light variety, has brought on a change. For the past twenty years, at least, the challenge has been to come up with suitable spinning lures that would catch their share of fish.

And while I make a big point of the pleasures that can be had through fashioning one's own lures, I must admit that the low cost of such lures has been a source of inspiration to keep me busily engaged at the workbench. A tackle counter item marked at \$1.45 can be duplicated for less than 30 cents with parts already to assemble from my supply boxes. Maybe it will be a little less fancy, but I think it will catch just as many fish. And in some cases *more fish* because I can incorporate the time consuming hand work that a manufacturer can't afford.

It must be remembered that retail costs include: the discounts allowed the wholesaler and retailer, the labor costs of painting and assembling, and his profit. In the end, an article with a selling price of \$1.45 has a "parts cost" of no more than 30 cents, and



Not pretty, but efficient. The parts to assemble all the lures in the photo cost less than the retail price of a single counter item.

sometimes less than that. If you've got more time than money then—tackle tinkering is for *you*.

I can also make changes I feel will improve the lure's fish catching abilities. For instance, I don't like the solid shaft used on most popular spinner lures as they give the hooked fish added leverage in shaking them loose, so I use a more flexible arrangement. And I prefer a feather or hair covered hook similar to the one used on the roostertail over those using the red plastic tubing popular on many models.

In duplicating the swing-type spinners, I start by wrapping some hair or feathers on a single or treble hook. Usually I use a long shank single hook for this type spinner so that clearance from the blade will be greater. I attach this to a short solid connector on which the spinner blade has been mounted. Then this solid connector is fastened to another short solid connector to which I pinch a No. 3 removable split shot.

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BIG NEWS FROM BIG SPRING

An Angler Special

by Jim Yoder

Big Spring's modern Administration Building incorporates a visitor center, office space, incubation and rearing facilities, and a maintenance section under one roof.

Pennsylvania Anglers can view with pride the Pennsylvania Fish Commission's Big Spring Fish Cultural Station. Located just above its namesake in Cumberland County, the new station boasts 8,000 feet of concrete raceways laid out on two separate tracts.

A conservative production goal calls for an output of 750,000 "year-olds" to be distributed from the station in early 1973. In addition to the three-quarter million yearlings, some trout may be held over for planting as two year olds; others will be retained for Big Spring's future brood stock, and after these commitments have been met, the excess fingerlings will be distributed to Cooperative Nurseries.

Traditionally, fish hatcheries are built "downstream" from their water supply. Because of the topography at Big Spring, the station was constructed *above* the spring in order to retain Big Spring Creek as a top notch trout stream. 3.4 miles of Big Spring Creek (immediately downstream) were acquired in conjunction with the actual hatchery site and elaborate stream improvement plans for this area call for (1) the removal of remnants of two former private hatcheries which were constructed *directly on the stream*, and (2) restoration of suitable habitat for the existing and future native trout populations.

Water from the spring is pumped

"uphill" to the head of the raceways and returns (via a waste treatment facility and two banks of aerators) to the stream below. The aeration enroute performs two vital functions: (1) unwanted dissolved gasses found in most sub-surface water are dissipated and (2) these gasses are replaced with life-supporting oxygen—so necessary to the operation of the hatchery and the downstream aquatic life.

This exchange, coupled with passage through the treatment facility is designed to return the used water to the stream in much the same quality as the original spring water. Wastes from a fish hatchery are almost completely organic (some mineral sediment will be encountered) and further treatment is not needed.

The "Spring" remains much the same as it has always been. The building at the extreme right is the pumphouse. Underground culverts permit utilizing its excellent water without further disturbance.





(above) The "South" raceways with the Administration Building shown in the distance. Concrete raceways permit the "crowding" of trout to a convenient point for removal.

maximum capacity, 8,000 GPM, will be infrequent. Even so, these two pumps are incapable of pumping the spring (or stream) "dry." During the construction of the pumphouse foundation, seven diesel pumps with ten and twelve inch discharge lines were barely able to "hold their own" in maintaining a low water level for placing the forms; if one unit failed, or was shut down for refueling, the water began to rise, despite the efforts of the other six. There is little likelihood of a shortage of water at Big Spring!

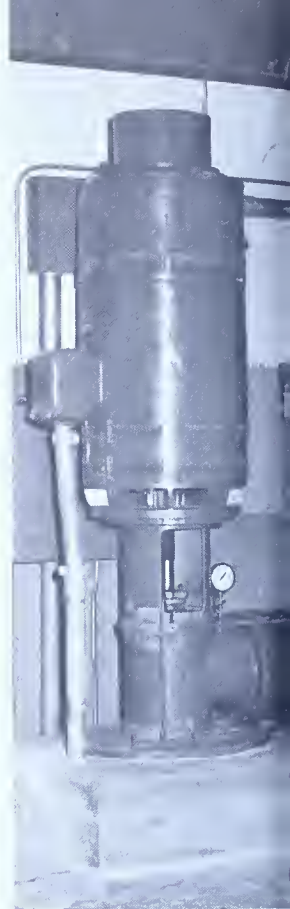
Thus, this two million dollar facility (on land acquired and developed with monies from both Project 70 and Project 500) is unique—in many ways. Its waste treatment plant

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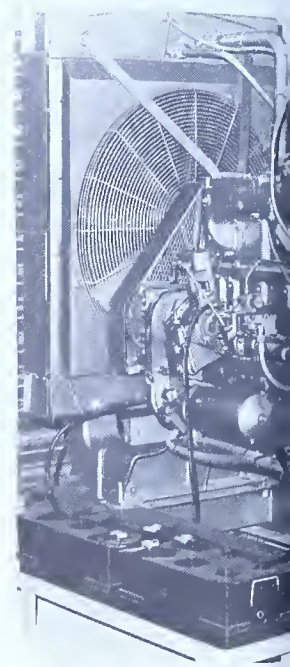
(below) Ease of cleaning and the absence of "dirt bank erosion" are a few advantages of concrete raceways. The "North" raceways are shown here; one of a bank of aerators can be seen in the foreground; the "spawning" building in the distance.



(center, top) Big Spring's two massive 125 horsepower, 4,000 gallon per minute pumps are more than adequate for the anticipated production load. They are capable of being operated at one-half of their maximum capacity (2,000 GPM each) during periods of low demand.



(center, middle) In the event of interrupted power this massive emergency diesel generator automatically restores full capacity to one of the pumps within a few seconds.

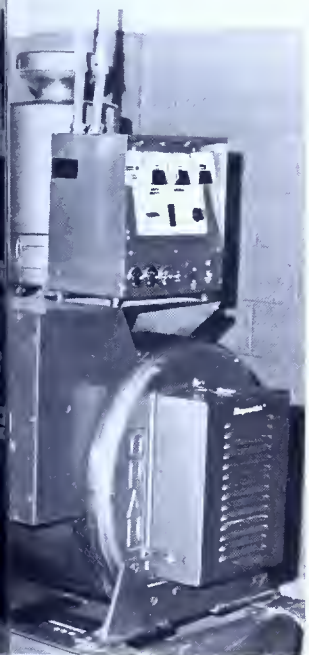


(center, bottom) Acting Superintendent Wayne Weigle checks the progress of trout eggs in one of the most modern and efficient incubation facilities in the nation. Housing literally millions of eggs in a relatively small room is typical of the excellent utilization of space that characterizes the Big Spring station.

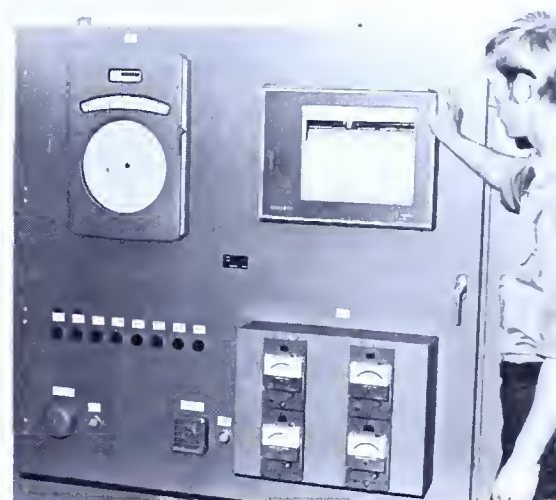




(above) Big Spring's waste treatment plant is another first. The clarifier settles solid wastes to the bottom; they are removed by a pump and ground; then excess water is removed in a centrifuge and the dry solids are disposed of—rather than returned to the stream below.



(right, center) Both water temperature and dissolved oxygen content (at both North and South aerators) is monitored and recorded at this panel. Similarly, a battery of warning lights (and bells) indicate emergency situations such as high temperatures, low dissolved oxygen, or "power off and generator running." Fish Culturist Calvin Jumper is shown checking the panel in the course of his regular rounds.



(lower right) Every precaution has been taken to insure Big Spring's compatibility with its immediate environment. This sensor monitors the dissolved oxygen content of the water leaving the clarifier **before** it enters the stream.



(below) Workmen are shown putting finishing touches to Big Spring's bulk feed bins. Trout in different stages of development require feed of varying sizes. A far cry from handling individual "sacks" of feed, this facility draws feed (from bulk shipments) by means of the large hose seen in the photo to a distribution control center on the platform. From there, it is literally "blown" into an assigned bin. At "feeding" time, it drops by gravity to an automatic feed-dispensing truck below.



Interagency cooperation pledged to assure protection of Pennsylvania's fishery resources at the first . . .

by JOHN THOMPSON, Chief
Administrative Branch
Division of Engineering

JOINT ENVIRONMENTAL SEMINAR

The Pennsylvania Fish Commission has always been actively concerned with safeguarding the aquatic resources of the Commonwealth. The *very existence* of Pennsylvania's fisheries depends upon the quality of her streams and other bodies of water.

The Commission's power to protect those resources is derived from its authority to enforce regulations under the Fish Law, and through participation with other agencies in the review process for the issuance of construction permits by the Department of Environmental Resources.

NEW BRANCH CREATED

The growth of this latter function in recent years led to the establishment in April of 1971 of the FISHERIES ENVIRONMENTAL SERVICES BRANCH within the Commission's Division of Engineering. This new branch is headed by Jack G. Miller, veteran Fisheries Biologist and his assistant will be Robert P. Mondock, Hydraulic Engineering Technician. Both are known statewide for their many years of work in connection with the Commission's stream improvement program and this will continue to be a responsibility of the Branch.

IMPROVED AQUATIC ENVIRONMENT

Most construction affecting waterways is undertaken by Commonwealth or Federal agencies in the form of highway, flood control, sewer, and water supply projects. Although each agency goes to great length to incorporate environmental conservation practices into the design and construction phases of their projects, the Branch found that more often than not changes could be made in those practices to protect, and in some cases, *actually improve* a disturbed aquatic environment. Furthermore, the engineering standards governing

such practices, (established by the Commonwealth's *primary conservation agency*, the Department of Environmental Resources) were being applied *differently* by each agency. Consequently, the need was recognized for getting the participants together to discuss the *original intent* of these standards, and each agency's *interpretations* of them. Of course, a corollary effect would be the improvement of both working relationships and interagency communications that are a direct result of people meeting on a face-to-face basis.

On November 10 and 11, 1971, meeting in the Commission's recently completed Visitor Center and Administration Building at Pleasant Gap, the Branch hosted some forty representatives from all eleven PennDOT districts, the Federal Highway Administration, the U.S. Fish and Wildlife Service, Wissahickon and Pennypack Watershed Associations, Department of Environmental Resources, and representatives of Commission's subdivisions.

PUBLIC'S CONCERN CITED

Edward R. Miller, Director of the Commission's Bureau of Fisheries and Engineering, opened the two day session with a welcome to all and a short but pointed talk on the public's concern for conservation and the steps the Commonwealth's agencies *should* be taking to preserve fish and aquatic life while achieving their own separate goals.

Principal panelists during the two day Seminar from the Commission were: Wilbert F. Hobbs, Chief of the Division of Engineering, who led discussions on the relationships between the organization of one agency and another in performing review functions; Jack Miller, who talked on the effects of the maintenance, improvement, and construction of highways on lake and stream limnology, and

Patrick Mondock, who covered possible steps to streamline PennDOT plans and review procedures.

Other principal speakers were: Dr. William Mineo, Wissahickon Watershed Association, and David Witwer, Pennypack Watershed Association, who talked jointly on the relation of watershed associations to environmental controls; Clinton R. Studholme, U.S. Fish and Wildlife Service, who explained Federal environmental review procedures; and Vaden R. Butler, DER, who described the requirements of his department as they affect design and construction methods used in and around Commonwealth waters.

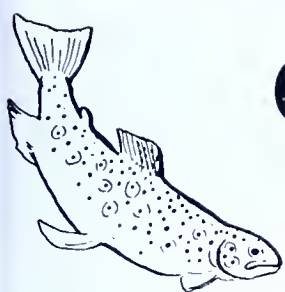
FUTURE HOLDS PROMISE

The final afternoon session consisted of a general evaluation and discussion of the Seminar's objectives. Consensus was that the Seminar was very successful in that by making each agency more aware of the others' problems, greater consideration would be given in the future to the Commission's goal of protecting aquatic resources.

The hosts conducted a field trip to a stream improvement project on nearby Spruce Creek.



SKUNKED AGAIN . . . RIGHT?

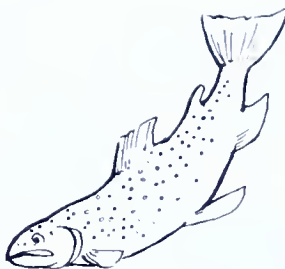


CASTING

WITH THE

CO-OPS

BY BILL PORTER



Ready for a change of pace? OK, here it is—cooperative large mouth bass instead of cooperative trout. How's that for a switch? For details, let's check the three-year pilot program of the Manheim Sportsmen's Association, Lancaster County.

The experiment began with former waterways patrolman, Sam Hall, and club members Ron Bomberger, Sam Hossler, Harold Romberger, his son, and others getting into the act. Eventually Bob Brown, the Fish Commission's Cooperative Nursery Coordinator, pitched in for the initial effort.

Water sources were no real problem as utilization of area farm ponds was considered. A $\frac{3}{4}$ acre pond, belonging to Mrs. Andrew Hackman, was selected with her permission and the work begun.

Now came the variations from cooperative trout raising. For one thing, young bass were more difficult to come by as the adults could not be stripped of eggs and milt as was the case with trout. So in June, 1968, 2,000 fry were transported to Manheim in four plastic bags. Fry, incidentally, are something less than fingerlings and give the appearance of a couple of eyeballs and a tail. A bass at this stage of the game might be a half inch or so long.

The tiny fish were placed in the prepared pond and fed a mixture of ground pellets, (which may not have been eaten) and some daphnia, (nearly microscopic aquatic life) that were apparently gobbled up as fast as the little bass could find them.

For 15 months Romberger, Bomberger, Hossler, and others nurtured the bass with minnows and other natural foods. It was obvious that the bass were growing, but how big they'd grow and how many remained mysteries. Then in October, 1969, the plug was pulled and the crop harvested. There were 452 bass wriggling in the wire catch box. This was about 25% survival—not high by trout rearing standards, but excellent for bass production.

The fish averaged nearly eight



Harold Becker assists with drawdown of Hackman Pond

inches, were fin-clipped for identification, and stocked in Speedwell Forge Lake. Phase one of the experiment was over and considered successful.

Phase two began soon after. Mrs. Hackman's pond was drained, allowed to dry, and preparations were made for the next batch of fry. Again the Fish Commission supplied 2,000 fry from its Linesville Hatchery. A quantity of daphnia were included.

The sportsmen extended feeding operations to raising fathead minnows to supply the natural food needed by the growing bass. This was a calculated effort to resolve some of the feeding problems of the first effort. Club members estimated that this secondary hatchery operation produced 300,000 minnows, most of which were fed to the ravenous bass.

Then in October, 1971, the plug was pulled again. After a drawdown, complicated by two turtles stuck in the drain pipe and a heavy down-pour, another harvest of fine, healthy bass splashed into the wire basket.

This time the survival rate was a bit better with 478 fish counted. The percentage was still about 25, suggesting expectancy rate for future production. The bass averaged the same size as the first crop. Top bass was a monster of 11 and $\frac{3}{4}$ inches—this fish no doubt took care of a number of his brothers and sisters when he was in the mood for a light snack.

The fish were fin-clipped and

stocked in two places. A three-acre farm pond, open to the public and owned by Lee Greiner, received half. The remainder went into Speedwell Forge Lake, making the second cooperative stocking of bass there.

When it was over, a wet and tired crew, including Larry Graff and Harold Becker, in addition to the fellows mentioned above, were obviously pleased with their venture and talked about adjustments and improvements for the next time around.

In summary then, some problems and variations from trout rearing must be considered that keeps the bass project in the experimental stage. Primarily, the difficulty is securing adequate numbers of young bass for the rearing ponds. A second problem is feeding. Bass need natural food in a lively state. They will not perform as trout do, following the feeder along the raceway waiting for a mouthful of pellets. Growth is slow. Even at 15 months, few bass are legal size.

Water quality is important, if not to the degree needed for trout; however the ponds must be drained, dried, weeded, and protected against the introduction of other fish, (carrying diseases or parasites) or competing for food. And there are other issues, including flooding, as the Manheim sportsmen well know.

In spite of the problems, the Manheim club did exceedingly well. Well enough, in fact, to make the future look bright for bass to eventually become a regular member of the *Casting with the Co-ops* offerings.



Ron Bomberger, Manheim Sportsmen's Association with some of 1971 Bass crop.

BOATING

QUESTIONS and ANSWERS · by CAPT. JACK ROSS ·

From G. R. F., Pittsburgh:

"None of the marine finishes I have tried will hold up on my steel-hull cruiser; what do you recommend?"

—The problem in refinishing steel hulls is not the kind of paint used, but the surface preparation. For a really effective job, there is no other means of cleaning the surface except by sandblasting, and this should be done by an experienced operator. If there is any significant pitting, you must sandblast to white metal, following immediately with a good primer. Unless surfaces are primed at once, the work will be wasted. We can personally recommend the Koppers epoxy system, which has been on our own steel boat for three years and shows no signs of wear or deterioration whatever. This product comprises a wash primer, and at least one coat each of an intermediate and a finished mixture. It is available in all shades of black.



From W. D., Coal Center:

"What is the proper method for aligning an inboard propeller shaft to the engine?"

—It's the other way around; you align the engine to the shaft, since there is no practical way to adjust the strut and stuffing box. Remove all of the bolts from the shaft coupling, break the fit by moving the shaft about a quarter-inch aft, then align the faces with a piece of metal of suitable thickness, checking the centering by applying a straightedge around the edges of the two halves of the coupling. Shim the engine mounts as required for good alignment, but do not attempt to align anything until the boat has been in the water for a few weeks, so that the wood is well-soaked and the kinks produced by winter blocking have worked themselves out. A reasonable

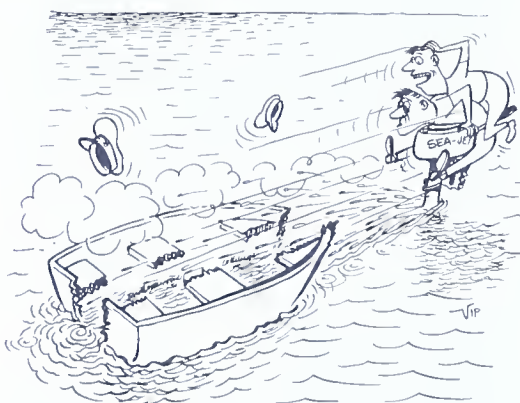
alignment is all that is required, since the shaft is flexible enough to withstand a fair error, and the bearings are rubber. Most boats are not constructed solidly enough to maintain perfect alignment in any case, so all that is required is a reasonably accurate fit.



From C. M. L., Hanover:

"Does a propeller work by the blades pushing on the water, or because a partial vacuum is created ahead of the blades?"

—In the case of pleasure boat props, the propulsion effect is due to the after side of the blade pushing on the water. If the prop were being pulled ahead by the vacuum it created, boat speeds would be very limited indeed, given the maximum effect of atmospheric pressure of 14.7



IT STARTS ON A DIME, DOESN'T IT?

pounds per square inch acting on the small surface of the typical prop. When considering large vessel propellers, however, it is possible to make an argument for the vacuum-pull theory. One school of thought has it that this explains the phenomenon of *negative slip*, the condition seen in certain large ships when the advance of the hull through the water is slightly greater than the theoretical advance of the wheel as measured by pitch times rpm. On the other hand, negative slip is only found

where the effective length of the hull has been carefully planned so that the ship is sliding down the wave it produces by its wake, so you can take your choice.



From B. L., Mercer:

"Which is best for refinishing a plywood hull, a disc sander or one of the flat vibrating types?"

—Neither is very satisfactory. A disc will cut furrows in the surface that will be impossible to remove, while an orbital or vibratory sander will cut deeper in the soft portion of the grain, leaving a rippled effect. If the present paint is sound, just hand-sand the hull enough to provide a bite for the new paint. If complete wooding is required, use paint remover or a blowtorch to clean off the hull, then hand sand using a block. If heavy sanding is the only answer, use a belt sander, but be very careful, or you will find yourself looking through the boat.



From T. L. S., Pittsburgh:

"The instructor in our boating class told us that propeller torque is caused by the angle of the shaft, so that the blade on a downstroke pushes harder than a blade coming up on the other side. Does this make sense?"

—No, but it's an interesting bit that has been perpetuated in a popular reference book used as a text by many of the educational groups. The principal cause of propeller torque (the tendency of a boat's stern to fall off in the direction that the propeller turns) is the difference in density, due to depth and surface turbidity, of the water acting on the top versus the bottom of the prop. That the shaft angle is not a factor should be obvious to anyone who has ever operated an outboard boat, which has a shaft angle of zero and just as much torque as its inboard cousins.

Modern Camping

by DEL and LOIS KERR



Hickory Run State Park is located on the southwestern edge of the Pocono foothills in Carbon County. It can be reached from Interstate 80, Pa. Rt. 903 or 534 or the northeastern extension of the Pennsylvania Turnpike which bisects the park. The 15,500-acre wooded park was first opened to the public in 1946 and was formerly the estate of General Trexler.

Within park boundaries are several springs and lakes including Sand Spring Lake, 11.4 acres; Hickory Run Lake, 3.5 acres, and Fourth Run, Spring Run, Hickory Run and Mud Run, all trout waters. Mud Run is a fly-fishing-only area and is stocked with three types of trout. Fishermen who prefer warm water species can fish the Lehigh River which forms the park's southern boundary. A bathing beach area is provided at Sand Spring Lake. Hikers will find well-marked trails throughout the park such as Fourth Run, Bear, Boulder, Skyline, Sand Spring and Pine Hill Trails.

Rehabilitation work on the campground at Hickory Run is scheduled to be completed and the full camping area opened by this summer. During 1971 only 104 sites were available for use at this popular park. With completion of construction, 360 sites will be available. Campers should be

able to secure a weekend site if they arrive by afternoon or early evening on Friday.

Along with the increase in the number of sites, other improvements include showers, hot water, flush toilets and a trailer dumping station as well as a new contact station and a camp store.

The most fascinating feature of Hickory Run is the Boulder Field which has been designated a National Natural Landmark. The boulder field in the northeastern corner of the park is approximately 400 by 1800 feet, largest in eastern United States.

According to geologists, the field, a relic of prehistoric times has remained unchanged for the last 20 thousand years. Boulders are 12 feet deep in places and water can sometimes be heard running deep under them. The field is composed of assorted boulders from 4 to 25 feet long, mostly red sandstones and red conglomerates. Geologists have determined that the boulders were broken from surrounding ridges by freezing and thawing in the Ice Age Period. The rocks have been stationary since that time. Now the forest is gradually moving onto the field with moss and small plants forming between boulders.

Nearby scenic attractions include

Hawk Falls in the southeastern corner of the park and Glen Onoko Falls, two miles above Jim Thorpe along the Lehigh River.

Fifteen miles south of Hickory Run is the city of Jim Thorpe, renamed for the famous Indian athlete of Carlisle College. The town was formerly known as Mauch Chunk. Attractions in the city include the Asa Packer Mansion, built in the 19th century. It is open Tuesday through Saturday from noon to 5:00 p.m. Asa Packer became a millionaire in coal and railroading and was also well known in politics and philanthropy. Lehigh University was established by him as well as other schools and hospitals. St. Mark's Episcopal church is an outstanding edifice which contains an imported marble altar. The jail at Mauch Chunk was filmed for the movie about the Molly Maguires. Flagstaff Park on Mauch Chunk Mountain, 1000 feet above the city offers a vista of the "Switzerland of America."

Another popular spot south of Hickory Run is the 4,300-foot-wide Beltzville Dam on Pokapoco Creek, which forms a lake five miles long. Facilities include picnicking, swimming, hiking, camping, fishing and boating.

Lake Harmony, 110 acres, off Route 903 in northeastern Carbon County, is stocked with largemouth bass, yellow perch, pickerel, blue gills and bullheads. Forty-five acre Tippetts Swamp off Rt. 54 at Nesquehoning, south of Hickory Run Park, is stocked with largemouth bass, pickerel and bullheads.

There is so much for the whole family in the southern Poconos . . . be sure to plan a visit and don't forget to pack the fishing tackle!



FLY TYING

by

chauncy k. lively



Theodore Gordon's Favorite Streamer Fly

Theodore Gordon ranks high in the Hall of Fame of American anglers for it was he who bridged the fly fishing gap between England and America by adapting the Halford style of dry fly to the entomology of the northeastern United States. The Quill Gordon, representing two of the early season ephemerids, is perhaps his best known and most widely used pattern. Pennsylvania anglers have a special reason to cherish the memory of Gordon for he was a true native son, having been born in Pittsburgh in 1854.

Although he retired to the Catskills and spent his latter years there for reasons of health, Gordon was well-acquainted with Pennsylvania's trout streams. He fished the streams of the Cumberland Valley and marveled at the numbers of native brook trout in Big Spring, "rising as far as the eye could see." He wrote of the big limestone stream at Bellefonte (Spring Creek) and of its difficult trout. He fished Young Woman's Creek during the lumbering days and was astonished that trout could survive the onslaught of running logs when the sluice gates of the logging dams were opened.

Theodore Gordon is best known as the father of the dry fly in America and he loved the floating fly perhaps best of all; but unlike George La

Branche he was by no means a dry fly purist. Through tireless correspondence with Skues, England's great pioneer in nymph fishing, he learned much about sub-aquatic insect forms and their importance in the food chain of trout. Thus, wet flies and nymphs were part and parcel of Gordon's fishing gear and he fished them when occasion dictated their use. He spent several years developing a streamer fly and when he was finally satisfied with its design he named it the Bumblepuppy and recommended it to his many angling friends. His enthusiasm for the Bumblepuppy was apparent in both his Forest and Stream essays and in his letters to the British Fishing Gazette. He urged his readers to try the fishlike streamer for all types of predator fish and he used it himself for bass, pickerel and large trout.

The Bumblepuppy shows the influence of the salmon wet fly, with its tag of two separate materials and its butt of thinner chenille than in the body proper, both of which parts are omitted in most modern streamer fly patterns. Gordon varied the dressing of the butt, sometimes using yellow chenille and at other times red chenille; in fact, he occasionally substituted black ostrich herl. Likewise, he sometimes made the head of yellow or red chenille in lieu of the com-

mon varnished black tying thread.

Some of the materials specified by Gordon in the Bumblepuppy's original dressing are no longer available and certain substitutions have been made in the tying sequence shown in the photographs. As tail material we have substituted sections of red-dyed goose quill for the Scarlet Ibis feathers originally designated. The shoulder hackle used by Gordon was a widgeon side feather but a well-marked flank feather of teal or mallard will do equally well. The import of jungle fowl is no longer permitted and the use of jungle cock eyes as cheeks in streamer flies will become past history when present supplies are exhausted. But imitation eyes of plastic are available and they are reasonable substitutes for real jungle cock eyes.

While the dressing of the Bumblepuppy may appear to be more complex than most streamer flies of recent vintage, the design was carefully thought out by Theodore Gordon and was the result of much trial and error. Gordon's chief aim was a minnow-like fly which looked alive in the water and in this he succeeded admirably. The Bumblepuppy, despite its relative obscurity, has withstood the test of time and today it will hold its own with many of the best modern patterns.

TYING

THE BUMBLEPUPPY



1. Clamp a long-shank streamer hook (size #6 shown) in the vise and bind black Nymo thread at bend. For tag, tie in a short length each of flat silver tinsel and red floss. Trim off the waste ends of both.

2. Wind tinsel down around bend about 1/4" and return tinsel over first layer, back to starting point. Tie off and trim away waste tinsel.

3. Wind floss down and over upper half of tinsel and return to starting point. Tie off and trim waste floss. Finished tag should show 1/2 tinsel and 1/2 floss.

4. For tails, tie in a matched pair of red-dyed goose quill sections, back to back. Length of tails is about twice the gape of hook. At base of tails tie in a short length of medium-diameter yellow chenille.

5. Wind chenille forward three turns to form butt. Tie off and trim excess. Select a large badger hackle, spread the barbles by stroking from tip to root and tie in tip of hackle at fore end of butt. At same position tie in a 6" length of heavy white chenille.

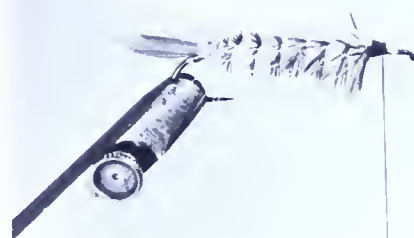
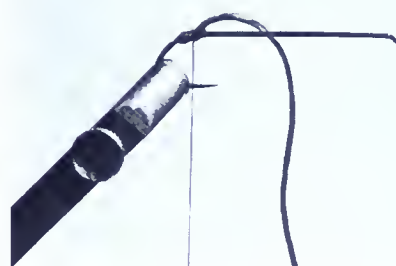
6. Wind white chenille forward to form a heavy body and tie off at shoulder position.

7. Wind hackle forward, open palmer style, and tie off at fore end of body. For underwing, tie in a bunch of white bucktail hair with tips extending a little beyond tails. Trim off butts of hair on a bevel at head.

8. Cut two matched quill sections from large, white goose primaries and tie in as outer wings, with concave surfaces against hair. Trim off quill butts at head, as shown.

9. For shoulder hackle, tie in a distinctly marked flank feather of widgeon, teal or mallard over base of quill wings. Take no more than two turns of hackle and tie off.

10. (Preceding Page): Finally, tie in jungle cock eye feathers (or substitute imitation jungle cock) as cheeks and build a neat head with tying thread. A whip finish and coat of varnish on head complete the Bumblepuppy.





FISHING FORECAST FINE!

The 1972 season should find the walleye fry that were stocked a few years ago, up to a legal size, and the channel cats will soon be of a goodly size. Over all, I am looking for a great deal of fishing to take place in this area over the next season, access is limited, and the canoeist will have himself a field-day fishing the riffles and holes for Mr. Smallmouth bass.

Robert J. Cortez
WWP (Clarion Co.)

CATCH MORE? KILL LESS!

Lake Wallenpaupack was stocked with trout in the 5 to 9 inch class, these were surplus trout and I was very glad to have them for this body of water. I observed a fisherman catch a trout of this size class and jerk the hook out, killing the fish. Did he place the fish in his creel? No, he threw it back into the lake and continued fishing. This fisherman was very lucky because when I had him retrieve the fish it measured over 6 inches in length. We had a little discussion regarding sportsmanship and this fisherman had the nerve to inform me that he is a sportsman and doesn't waste any fish he catches. He could have fooled me! The next day I was at the access area when Mr. Dan Leonard, maintenance foreman for this area came for the garbage and he told of finding legal size trout in two of the garbage cans! The persons who threw the fish in the garbage cans are probably the ones that cry the loudest about there not being any trout in the lake.

Joseph E. Bartley
WWP (Pike/Wayne County)

BIRD WATCHERS PARADISE

The Fish Commission's Lake Nesmuk in Tioga County was dedicated last summer, and was officially opened for recreational use. Fishing has been furnishing a lot of recreation for many people. One day as I went along the lake I observed some people along Highway 287 but they were not fishing. They were watching two

broods of Mallard ducks working along the shore line. As nearly as I could count, there were eight ducklings in one brood and eleven in the other. Hunting is prohibited on the lake so this should turn out to be a good place for bird watchers. Many geese have also been observed on the lake last fall.

Raymond Hoover
WWP (Tioga County)

CAN'T BEAT 'EM? JOIN 'EM!

During a stream improvement project at Bradys Run Lake, the Boy Scouts were really engrossed in building several devices when Special Waterways Patrolman, Art Newton, of Lawrence County, approached one of the leaders. Can you tell me where I might find Don Parrish?", asked Art. The leader inquired, "What Troop is he in??"

Donald Parish
WWP (Beaver Co.)

CURE-ALL!

While at the Bloomsburg Fair, Officer Perry and I were discussing the sale of ANGLERS, when a gentleman came to the booth to buy a "perscription." Officer Perry said, "you mean a SUBSCRIPTION?" "No, he replied, a perscription—because the Angler will cure any ills!"

Robert E. Fasching
WWP (Lackawanna Co.)



"THIS LOOKS LIKE AS GOOD A SPOT AS ANY."

POET LAUREATE?

WARNING:

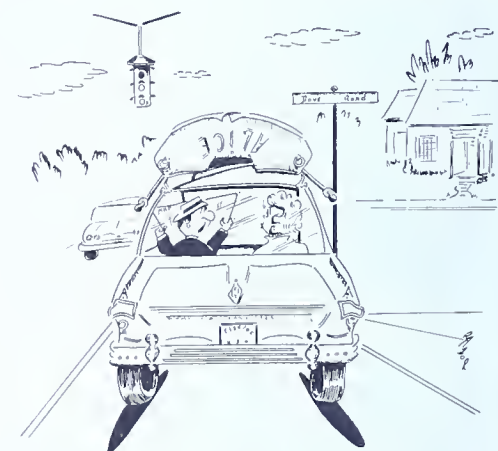
To swimmers in the Monongahela River:

The old mill stream
Where once we embraced
Flows gently now
With industrial waste.

This river's brown . . .
Where the wastes revolve;
You may not drown . . .
But you *will* dissolve!

If your skies
Are getting grayer
Some polluter's
Bought your mayor!

James R. Smith
WWP (Allegheny Co.)



"I KNOW WHERE THE RIVER WAS ALICE!
. . . I'M JUST CHECKING TO MAKE SURE IT
HASN'T CHANGED COURSE!"

HOT SPOT!

Some very nice walleyes have been taken on live minnows from the Allegheny River during the past couple of weeks. A real hot spot is between Franklin and Reno in the vicinity of the Oil City Sand & Gravel Company dredge.

Clarence W. Shearer
WWP (Venango Co.)

HE'S JUST GRATEFUL—THAT'S ALL

In the past five years that I have been in Forest County, I have received many letters and phone calls concerning the beautiful trout that were stocked and also the way they were stocked in the streams and lakes. I would like to 'tip my hat' to the fine work of the Oswago & Corry Hatchery where these trout were raised. Also, hats off to the Kellettville Sportsmen Club, Forest Sportsmen Club, Marienville Rod & Gun Club and Mr. Gary Long and his Youth Group from the East Forest High School, for all the help that I received.

Joseph Kopena
WWP (Forest County)

ANOTHER . . .

I have in the past years assisted the truck drivers dipping fish from the truck on stockings and I have come to this conclusion. When you are on the ground carrying fish to the stream there doesn't seem to be as many fish on a truck as there are when you are on the truck dipping to the others to carry. I always get assistance from Mr. Rich Labrozzi's students from Cameron County High School.

Stanley G. Hastings
WWP (Cameron Co.)

STILL ANOTHER . . .!

Since many of my fellow officers use this medium to thank various groups for their efforts, I have decided to do likewise to pay tribute to a fine group here in Beaver County. I extend a sincere thank you to the boys at the Raccoon Creek State Park Youth Forestry Camp for their fine cooperation with every fish stocking during the last three and a half years. Regardless of weather conditions these boys are always on hand!

Danald Parrish
WWP (Beaver County)

COMPLAINTS

It is not often, but waterways patrolmen sometimes receive damage complaints that might seem odd to some folks. One last year—eels and flieg (?) fish—that is what the person called them, damaged a water turbine. Looking into the complaint I found that the eels had damaged it—the flieg fish—I don't know about them! Quite often we receive word that water snakes are taking all the small trout, and we find that the snakes will take some small trout, but I will not say *all* of them. Another complaint received is that turtles, "are taking all of the fish from my pond! It's not safe for my children to go swimming!" So we have helped to remove turtles from farm ponds. A complaint received from a motel owner in the Bedford area several years ago: "can you help me remove the frogs from along the river behind my motel? They croak and keep the people awake; they scare some of my guests—I need your help! Some of the people refuse to come back!" The owner was informed that after the first several days of frog hunting season, his troubles would be over. My last damage complaint—frogs on a golf course! "can we get them removed?" Again, I advised that after the frog

season comes in the problem will be over! However, a cart ran over a frog and a golf player took a nasty fall by slipping on the remains!

William E. McInoy
WWP (Bedford County)



FROM THE MOUTHS OF BABES . . .

Recently I stopped a motor boat for an no observer water skiing violation, and when I asked the owner did he know why he had been stopped, he stated he didn't. I advised him of the law, and his young son, one of the two skiers, stated to his dad, "See dad, I told you we need one person in the boat to watch."

Gerald T. Crayton
WWP (N. Allegheny County)

NATURAL REPRODUCTION

On two different occasions my attention was called to the fact that very large brown trout were spawning in tributaries of the Delaware River. One pair at the mouth of the Big Equinunk Creek. This pair were over eighteen inches long. The other two were in the Hollister Creek near Callicoon. The fish would measure well over fifteen inches and were watched off a bridge by many people.

H. F. Reynolds
WWP (Wayne Co.)

MAD DOGS—BEWARE!

While on duty at Erie, Officer Brown and I were assigned a section of the Lake Erie shoreline to search for a lost fisherman and boat. Our shift started at 12 midnight on a cold, snowy and blustery night. Officer Brown told me that we would have to be careful of dogs, and since we were on foot patrol and the terrain of the lakeshore made it necessary on some occasions to walk through residential areas, two of the biggest and meanest dogs came after us. Officer Brown was just saying something

about the dogs being friendly as I jumped down over a 30 foot cliff. Guess who jumped after me? Officer Brown passed me up sliding down the cliff in hot pursuit! Bernard D. Ambrose
WWP (Elk Co.)

OH BOY!

While on boat patrol on Curwensville Dam. Deuwain Rickard, Special Waterways Patrolman and I observed a fellow sitting on the bank fishing. Without going ashore I asked him if he had a fishing license. He said, "yes". I asked him to hold it up and got no response. Going ashore, I asked him again if he had a license and again he said "yes, my license is in my car." I said, "let's go to your car and see it." His next reply was, "I forgot where I parked my car"! My next question, "Sir you *don't* have a fishing license, do you?" With a big grin he said "No", then told me he had no bait on his hook and the can of worms sitting next to him were not his!

Edward W. Brown
WWP (Clearfield County)

BIG NEWS FROM BIG SPRING

continued from page 16

is a first for Pennsylvania (perhaps for Eastern United States); the egg taking facilities built into Big Spring will allow fish culturists to conduct spawning activities with ease and a minimum of handling—and will also permit efficient treatment of the brood stock to ward off fungus and other infections (with materials compatible to *live* fish). Big Spring is the most modern installation of its kind in Eastern United States and ranks high, on a national scale, as one of the most modern and efficient fishcultural stations in existence.

Wayne Weigle, Acting Superintendent at Big Spring concluded the writer's tour of the station with a visit to the stream immediately below the station's effluent pipes. He pointed to not less than two dozen beautiful brook trout schooling about in the turbulence and grinned quite approvingly. Justifiably so, I thought. These beauties appeared to be in the 11 to 13 inch class and their bright orange coloration was quite visible even through the depths of rolling water. Certainly Big Spring will be quite helpful to the Pennsylvania Fish Commission in its efforts to expand its fisheries program to meet the demands of the future.

Dedication of the new facility is planned for the near future.

The Palomino Rainbow Trout

continued from page 9

The bases for the monohybrid inheritance and for the regularity of the results also are embodied in Figure 2. Thus a normally pigmented parent can be designated as pure or true-breeding or *homozygous* for one form of the color gene (G) while the golden is homozygous for the alternative allele (G'). Single alleles occur in the sperm and eggs of these fish and when fertilization occurs only heterozygous (GG') palominos result. Palominos then produce equal numbers of two kinds of eggs or of two kinds of sperm with a single allele (G or G') in each. Since fertilization is a random combination of eggs and sperm, G-bearing eggs can be fertilized by G- or G'-bearing sperm. Similarly, G'-bearing eggs can be fertilized by G- or by G'-bearing sperm. The result is the 1GG:2GG':1G'G' ratio shown; this ratio has been realized in numerous families in addition to the one cited above.

Now, what types and frequencies of offspring would occur from backcrossing a palomino to a golden? Or to a normal? Again, remember that a palomino produces equal numbers of two kinds of sex cells, G and G'. If these combine with the single kind of sex cell G' of the golden, ½ of the offspring would be palominos (GG') and ½ would be golden (G'G'). In a family from palomino x golden, 70 offspring were counted: 33 were golden and 37 were palomino (expected 35:35). Or if the equal numbers of the two kinds of sex cells from a palomino combine with the single kind of sex cell, G, from the normal, ½ of the offspring would be normal (GG) and ½ of them palomino (GG'). In a family from palomino x normal, 134 offspring were counted: 69 were pal-

omino and 65 were normal (expected 67:67). With results like these, anyone could be a fishy geneticist!

Two fish like that pictured at the top of Figure 1 have been found among palomino progeny and raised to maturity. These are *chimeras* made up of a mosaic of two genetically different tissues and they resemble the original female which was the progenitor of the West Virginia golden stock. One of these fish, a male, proved to be a chimera in its reproductive tissue as well as in its body tissue. When this male was crossed to a pure golden female both golden and palomino offspring resulted, indicating that its gonad was essentially that of a palomino. However, the other, a female, when crossed to a normal rainbow, produced all normal progeny as if its gonad were pure for normal. While unusual and infrequent, these results are not restricted to fishy genetics; they have been recorded for other animals and for plants.

Finally, in addition to the *qualitative* genetic analyses described above, studies of a more *quantitative* nature have been done with the palomino rainbows. These studies were initiated when it was found that a great variation exists in the degree of pigmentation of palominos from different sources. The question was raised if this variation was genetic or environmentally produced. The answer seems quite clear that the variation is genetic for when goldens of a given source are mated with a very dark colored normal, the palomino offspring are uniformly darker than palomino offspring from crosses of the same golden stock with light-colored normals. Indeed, it is possible to obtain palominos from the latter type of cross which are hardly distinguishable from pure goldens. Thus genes for background color are superimposed on the gene for dilution which is primarily responsible for the goldens and palominos.

PFC Fish Stocking Manager Receives "Governor's Meritorious Citation"



Fish Stocking Manager Bud Brooks (right) a veteran employee with more than 29 years service to the Pennsylvania Fish Commission is shown receiving his citation from Ralph J. Putt, former Director of the Bureau of Administration.

Bud's award was given in recognition of his efforts in "streamlining" the Fish Commission's fish distribution program which resulted in a saving of nearly \$40,000.00 during the '69-'70 fiscal year. Briefly, Bud, in cooperation with hatchery superintendents and district Waterways Patrolmen, devised a system which better utilized the new, larger distribution units. Within this fiscal period, manpower distribution costs were cut from 10¢ to 6.5¢ per pound! Insignificant? Not when the Commission "ships" more than one million pounds a year!

Bud is still far from satisfied. His goal 5.0¢ PER POUND! During 1971 he has succeeded in getting it down to 5.9¢!

It would appear then, that over \$80,000.00 has been pared from shipping costs in only two fiscal years. Using a little imagination and some mathematics, what do you suppose Bud has saved Pennsylvania Anglers since the program was implemented in 1968—when shipping costs at some stations ran as high as 14.8¢ per pound?

Double Barreled Rod

by Reid Kling, Jr.

I was bitten by the trout fishing bug back in the early thirties. In those days, tackle for trout was rather limited in scope, and the angler also had a more pressing limitation on the tackle he could buy—lack of cash. The country was in a great depression, and finding money to pursue one's avocation was quite a problem.

I can recall quite vividly the one season that I bought a Hardy 9 ft. gut leader which included one extra tippet for the unheard of price of .90¢. After the purchase, I was almost afraid to use it. Needless to say, each and every fly was bent on with the utmost care so as to have as little tippet waste as possible. I also can remember that I climbed quite a few trees that summer to disentangle flies without putting the slightest strain on my expensive leader.

Rods, back in those days, were mostly split bamboo—the good ones were expensive, the cheaper ones an abomination. The most popular lengths were 8½ ft. 9 ft., and they were used for both fly and bait. I do remember one hollow steel stick that I had which lasted exactly one season.

Lines, both level and tapered were made of silk, required constant care, and gobs of grease to make them float. One of the worst things that could happen, and generally did, was to make an outrageous investment for a new line, and find out too late that it was one of those that got "tacky".

After World War II, nylon and fiberglass made their appearance, and a new method of fishing arrived upon the scene—spinning. Although I can find no figures to substantiate my statement, I would assume that more people are fishing by this method than any other.

Today the modern angler has the finest equipment that man's technology can produce. Rods made of fiberglass for any type of fishing, from the fairy wands of 2oz. for trout fishing small streams, to big game rods for saltwater use. Lines made of nylon that float without dressing, with modern tapers for casting ease, rot resistant and practically care free. Lines of dacron, another miracle fiber, that sink like a rock to take your fly down deep. Today's leaders,

made of nylon, require no soaking, are inexpensive, and have tippets as fine as 7x. Fly fishing indeed, has come a long, long way.

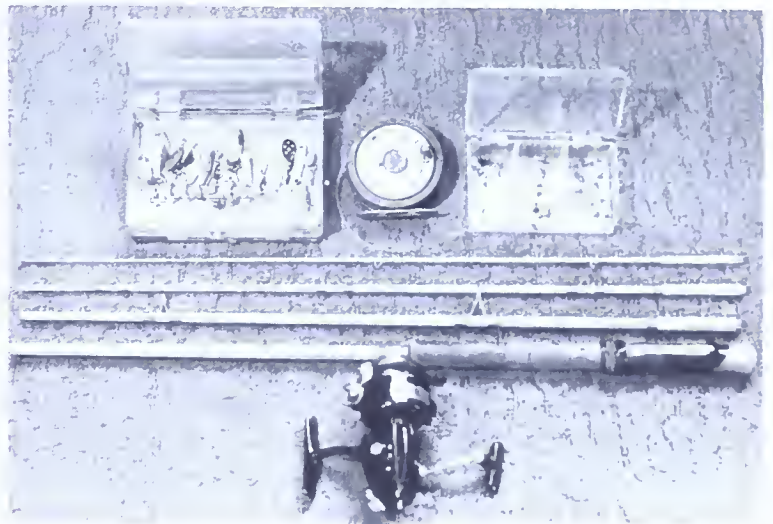
Spinning, the newest method of fishing in this country has also made great strides in improving equipment in the relatively short time it has been with us. Rods, reels and lines have all been tremendously improved in the past twenty years.

The last few years have seen yet another innovation—the *fly-spin rod combination*. These little rods, now being made by most of the better rod manufacturers were first called to my attention by my teenage son. I had seen them listed in the various catalogs that I receive, but I had never given them more than a cursory glance since all my trout fishing is done with the fly rod. My son, however, has been doing his trout fishing with a light spincasting rod. This past winter he informed me that he would like to try fly fishing this season. It seemed that he needed a new rod for spinning, and with a combination fly-spin rod he reasoned that he could avail himself of one of my fly reels and lines. He also made me aware of the fact that since I tie my own flies an adequate supply of those would pose no problem. The way in which this whole idea was presented to me had me believing that to get him outfitted for fly fishing was actually going to be a profitable experience.

I have never been much of a believer in the multi-purpose gadget, and, quite frankly, I was skeptical of the dual purpose rod. Mike's logical reasoning, however, prevailed. But instead of buying a rod, we purchased a rod kit from one of the better tackle makers and I built it myself. This proved to be the only part of the whole idea that saved me any money. The total cost was less than \$25.00, or approximately one half the retail price as listed in the catalog.

Some of the models we looked at had a reversible handle with a plug ferrule fitted to the end of the rod so that the handle could be reversed to accommodate either a fly or spinning reel. The model we decided upon has a sliding reel seat—you can slide it down to the lowest position on the rod handle to affix your fly reel, or slide it up to the midway point on the handle to take care of the spinning reel. The rod's finished

continued on next page



The Incredible EEL

continued from page 12



Fred Mussel, Lehigh County Waterways Patrolman, shows a group of students why this is the animal that everything else is "AS SLIPPERY AS."

Female eels may attain a length of four feet or more while males rarely grow half as long. The Pennsylvania Fish Commission lists a 46 inch, 8 lb., 8 oz. eel caught by Mrs. George Buchanan in Licking Creek, Juniata County in 1954 as the state record.

Eels are long-lived and some have been listed as surviving for more than fifty years. Old age occurs primarily in the landlocked individuals that never return to the sea to spawn.

A single spineless fin extends along the back, around the tip of the tail and forward on the underside of the body. Unlike most other fish, an eel's lower jaw extends past its upper jaw. The mouth is

lined with small needle-like teeth. Powerful muscles enable eels to climb waterfalls in a fashion similar to that of the salmon. Specimens have been taken from lakes over 8000 feet above sea level.

Anyone who has purposely fished for eels or mistakenly hooked one, knows that they seem to bite best at night or when the water is cloudy. They can do this because of "taste buds" along either side of the body similar to those on our own tongue. Besides aiding in the detection of food, it is believed that these taste sensors aid them in their migrations across the Atlantic.

An eel is one of the most voracious feeders in our waters. They are both scavengers and predators—feeding on dead things as well as mollusks, insects, worms, eggs, crayfish and just about anything else they happen to meet. Stomach x-rays have revealed wood, metal, springs and bones of small rodents and water birds.

A DELICACY TO SOME

The meat of an eel is white and firm and of the few I've tasted, sweet. In Old World countries they are pickled, broiled, fried or smoked and regarded as a delicacy. An Italian tradition of fresh eels at Christmas creates a great demand for them in some of our larger cities.

Although a few anglers still get a kick out of dunking a tangle of worms for eels, they are caught commercially by the thousands in long, cylindrical traps called "eelpots" or in deep V-shaped boxes.

Eels are relatively easy to skin. After tying a string around the eel's head and fastening the string to a nail, a shallow slice is made through the skin just below the head. A steady pull with a pair of pliers will peel off the skin like a finger out of a glove.

The next time you reel in a battling female eel or curse a small "shoestring" for twisting up your catfish line, take a moment to contemplate the slimy, snake-like creature before you. It holds the experience and wisdom of one of Nature's most mysterious events.

Double Barreled Rod

continued from page 27

weight is $3\frac{3}{4}$ oz., and its seven foot length breaks down into four $21\frac{1}{4}$ " pieces—just a perfect size for ease in transporting. Long before the season opened, Mike had strung and restrung the rod a dozen times! I found him one evening, upon my return home from an appointment, tossing a small practice plug on the front lawn in four inches of snow.

Opening day finally arrived and he had the opportunity to give it a good workout under actual field conditions. With a light spinning reel it flips small spoons and spinners a country mile, and it turns over a seven weight fly line beautifully.

It was the end of May before I had the opportunity to fish the rod myself—and then, only by surrendering one of my pet fly rods to my son. After I had used

it a couple of times. I visualized the many benefits to be derived from owning a rod of this type. First, the *financial benefit* since only one rod is needed to either fly fish or spin. Secondly, when you are far astream spinning, and a hatch of flies appear that cause the trout to rise, no more long trek back to camp or car to uncase the old fly rod. With a quick change of reels you are in business. A small box of lures and flies, the two reels, and the short rod can be packed in a small overnight case, and the man so equipped can enjoy trout fishing anywhere in the country.

The greatest benefit that I am deriving from this rod, other than the pleasure of occasional use, is seeing my son develop into a competent fly fisherman. His casting ability is improving with every trip afield, but, in the interim, if his heart's desire is to do some spinning, that too can be done—and all with the same double barreled rod.

Fishing Outlook

continued from page 4

fishermen who regularly frequent this area are many from the Baltimore—Washington area. This .5 of a mile stretch stays fairly clear all year round and nymph fishing produces best in March. Small may flies and stone flies, sizes 14 to 20, preferably in the darker shades are the ones to use now.

The project on the North Fork of Redbank creek within the city limits of Brookville in Jefferson county gets most of its play from Pittsburgh area anglers. A good wide fairly deep stream it supports plenty of Caddis and May flies. Very seldom muddy, it clears up rapidly even after the heaviest of downpours. This 2 mile stretch fishes well in early spring with nymphs and wet flies.

The Little Lehigh in Lehigh County runs through the Lehigh Parkway system in the city of Allentown. Limestone stream basically, it has lots of may fly hatches with an exceptional Quill Gordon hatch in late March and early April. The wee small, 20 to 24, Caenis flies are nocturnal hatching and sometimes these fish well mornings as spent spinners. A fair sized stream, 30 feet or so wide, it has a

good pool-to-riffle ratio because of lots of hard work by Allentown area anglers in installing stream improvement devices. Fishermen from along the southeastern border of the state from Easton to Philadelphia make up most of the regulars at this project.

Marvin Creek in McKean County might still be frozen over in March. Averaging 20 to 25 feet wide and with good depth and nice pools, it doesn't get the pressure that most of the other fish for fun areas get. Best bets here in the early season are the darker colored wet flies and streamers.

The project on Kettle Creek in Potter county is still in its infancy. It was approved at a recent commission meeting and still needs work. 1.7 miles long, it's normally fishable from mid March on. Good Caddis fly hatches, and nymph fishing is tops. Light shades of the Honey Bug work well on Kettle Creek.

Neshannock Creek in Mercer county is about the same size as the Little Lehigh—30 feet or so. It is generally a shallow slower moving stream. Pressure here is mostly from the Newcastle—Sharon area. Streamer fishing and the bigger wet flies do best in March on this stream.

The West Branch of Caldwell Creek

in Warren County is open to spinner fishing as well as fly fishing. 2.5 miles long, it is in a heavily forested area with lots of evergreen cover. 15 to 20 feet wide it has plenty of nice deep holes and is basically a Brown Trout stream. Some Rainbows and just a few Brookies are present here. This is another stream that may be frozen over in early March. Brightly colored streamers like the Mickey Finn or the Coachman work best in spring. The most popular spinner has been the small Panther Martin in silver.

Fishing these streams keep in mind that plenty of others have preceded you and the fish in the stream have seen just about every size, pattern and color of fly imaginable. These fish are extremely wary of leaders, so use as fine as you can. A good deal is to buy a 150 yard spool of Ardee invisible nylon sewing thread at one of the local supermarkets. Use this as leader tippet material. It runs around 35¢ a spool and comes in both white and dark. The dark, coffee colored has proved to be the best. It's extremely fine and has good tensile strength for its size. It's almost invisible on the water too. Later on in the season when the water is crystal clear and you have to fish the surface this type of leader is almost a must.

SAFE BOATING COURSES UNDERWAY

Following is a listing of Boating Schools scheduled throughout the Commonwealth by the Pennsylvania Fish Commission and the Coast Guard Auxiliary. The PFC three lesson, six hour course, titled "Boating Pleasure," is a free course for all age groups. YOU are cordially invited to attend.

If you plan to attend any of these courses, drop a note to your District Waterways Patrolman to that effect. Give your name and address—and the number in your "party." His name, address, and phone number appear in the back of your Pennsylvania Pleasure Boating Requirements pamphlet.

REGION I (Northwest)

March 7, 14 & 21—7:00 to 9:00 P.M.
YMCA, 34 North Broad Street
Ridgway, Pennsylvania
March 8, 15 & 22—7:00 to 9:00 P.M.
YMCA
Meadville, Pennsylvania
March 14, 21 & 28—7:00 to 9:00 P.M.
Warren High School
Warren, Pennsylvania
March 11 (one day)—10:00 A.M. to 4:00 P.M.
Pymatuning Sportsmen Club
Linesville, Pennsylvania

REGION II (Southwest)

March 14, 21 & 28—7:30 to 9:30 P.M.
Rustic Lodge, Route 286
Indiana, Pennsylvania
March 22 & 29, April 5—7:30 to 9:30 P.M.
Allegheny Center Mall (Community Room)
Pittsburgh, Pennsylvania
March 23 & 30, April 6—7:30 to 9:30 P.M.
John Dewey Jr. High School, 1100 Wash. Ave.
Carnegie, Pennsylvania

REGION III (Northeast)

March 8, 15 & 22—7:00 to 9:00 P.M.
Carbon County Courthouse
Jim Thorpe, Pennsylvania

February 24, March 2 & 9—7:00 to 9:00 P.M.

Columbia County Courthouse
Bloomsburg, Pennsylvania

February 28, March 6 & 13—7:00 to 9:00 P.M.
Lycoming County Courthouse
Williamsport, Pennsylvania

March 14, 21 & 28—7:00 to 9:00 P.M.

Monroe County Courthouse

Stroudsburg, Pennsylvania

March 29, April 5 & 12—7:00 to 9:00 P.M.

Northumberland County Courthouse

Sunbury, Pennsylvania

March 20 & 27, April 3—7:00 to 9:00 P.M.

Pike County Courthouse

Milford, Pennsylvania

February 22 & 29, March 7—7:00 to 9:00 P.M.

Union County Courthouse

Lewisburg, Pennsylvania

February 25, March 3 & 10—7:00 to 9:00 P.M.

Wayne County Courthouse

Honesdale, Pennsylvania

REGION IV

March 17, 24 & 31—7:00 to 9:00 P.M.

Adams County Bank, Old Route 15

Gettysburg, Pennsylvania

March 7, 14 & 22—7:00 to 9:00 P.M.

West Chester YMCA, High & Chestnut Sts.

West Chester, Pennsylvania

March 15, 22 & 29—7:00 to 9:00 P.M.

Penn Harris Gun Club (Off Rt. 283), R. D.
Highspire, Pennsylvania

February 17 & 24, March 2—7:00 to 9:00 P.M.
Lancaster YMCA, 572 N. Queen Street
Lancaster, Pennsylvania

March 10, 17 & 24—7:30 to 9:30 P.M.
Lebanon YMCA, 9th & Willow Streets
Lebanon, Pennsylvania

Also beginning in February: 8 Week Coast Guard
Auxiliary Boating School

February 27, March 5, 12, 19 & 26, (also April 2,
9 & 16) 8:00 to 10:00 P.M.
Oakmont Yacht Club, 11 Washington Ave.
Oakmont, Pennsylvania

March 8, 15, 22 & 29, (also April 5, 12, 19 &
26) 8:00 to 10:00 P.M.
Butler Senior High School
Butler, Pennsylvania

March 8, 15, 22 & 29, (also April 5, 12, 19 &
26) 8:00 to 10:00 P.M.
Pioneer Hose House (Fire Company)
Brackenridge, Pennsylvania

March 14, 21 & 28 (also April 4, 11, 18 & 25, &
May 2) 7:30 to 9:30 P.M.
Monroeville Mall (Community Room) Route 22
Monroeville, Pennsylvania

A FISHING FEATURE FOR FISHERMEN FROM FISHERMEN

FISH TALES

by Doris Katsonis



ROBERT MILLER (left), 13, of Boothyn caught his nice brown trout, a 20-inch, from Ridley Creek in Delaware Co. last May. He earned a Pennsylvania Angler Junior Citation for this one!



DAVID LITTS (standing left) holds his 19¼-inch smallmouth bass while his buddy RUSTY GARIS holds his 25-inch walleye. The boys were fishing from the Susquehanna River in Susquehanna Co.



Lake LeBoeuf is the site of MERLE BROWN's catch of this 38½-inch, 16 pound musky. His brother Steve (right) is happy to help him hold it. It hit a rapala early last May 30.



TUCKER LLOYD of Hawley, was fortunate to land these two nice browns one day in April. They were taken from Lake Wallenpaupack and measured 15 and 20 inches.



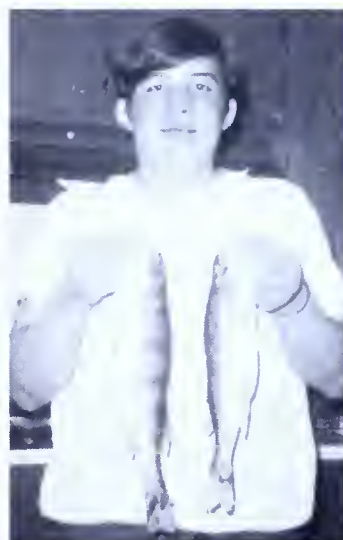
JIM DURST, an Erie sailor home on leave from Quonset Point, shows proof of that fish tale—5 browns and 3 rainbows taken from Brokenstraw Creek on April 17.



A York youth, JOHN REYNOLD, caught this 28-inch carp from Little Conewago Creek in York Co. last July. He used spinning equipment and corn and won a citation.



DALE REICHERT, above, of Abbottstown caught this 32-inch carp from the Susquehanna River, and JEFF BURN, left, holds three yellow perch caught at Lake Carey. DALE BURKERT of Reading caught his 15-inch crappie at Bernharts Lake. All won junior citations for the boys.



JAMES APICELLA (left) of Pittsburgh caught his 32 inch walleye from the Allegheny last winter using spinning gear and a jig, while MICHAEL DAVIS, York, (right) displays one of his many catches—a 25 inch carp taken on corn from the Little Conewago in York Co.

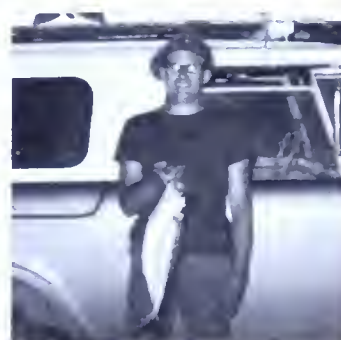
14 year old PAUL GRIST, JR. of Bessemer (left) won both junior and senior citations for these yellow perch from a quarry in Lawrence Co. MICHAEL SUCHY of Elizabeth (right) caught his 19-inch carp from the Youghiogheny River. A cat ate the fish.



R. MIODUSZEWSKI of Pittsburgh landed his 35 inch musky at Tionesta Creek last May and became a member of the Honorable Mention Husky Musky Club. It hit a rebel.

A Willow Street resident, WILLIAM FISHER, had opening day luck and caught this 20¼-inch brook trout from Muddy Creek Recreation Park.

ALLEN MILLER of Woodbury holds the nice 21½-inch, 5½ pound, large-mouth bass he caught last summer from Shawnee State Park. He was using a jointed black jitterbug.



JOHN NANIEWICZ of Eynon poses with his stringer of one trout, four walleye, and two perch taken from Lake Wallenpaupack using nightcrawlers, while JACKIE SHORTS (right) of Wilkes Barre holds his stringer of trout caught from Harvey's Lake last April 17.

JOHN CAVENDER, 14, Monaca caught his walleyes while drift fishing with dad on Pymatuning Reservoir last June. They measured from 18-28 inches. DAVID BONSER (right) of Saylorsburg caught his 26½-inch American Shad from the Delaware last May. It took a shad dart.

"Tackle Tinkering"

continued from page 14

Crazy? Yes it is. But for less than a dime I have a lure that is just as practical in every respect as its more costly prototype, and has the advantage of the flexible shaft.

Too often, when it comes to duplicating a commercial lure, we feel that *exact* duplication is necessary. This is far from a fact, as year's of trial and effort have proved to me. If the fish-getting principle that has made the lure successful is incorporated in the duplicate, the *actual* features can be widely varied.

For instance, some of my most successful days on bass have resulted from the use of popping lures. And for years I duplicated the commercial poppers to a "T." Presently, though, I am using a "bobber" lure that is just as productive, and less bother to make.

It may be that ease of assembly may be the chief requirement of the lures I use. At least I find that the ones that assemble easily usually get the nod if I feel they are just as efficient as others when it comes to taking fish.

This is the case, I know, with the flicker-type lure I favor. This highly effective fish getter has been my ace in the hole on many a day when the fish were coming tough. Yet I can assemble one, using the size spinner blades I prefer for conditions, in less than three minutes, and at less than one-third the cost of the counter item.

On a suitable hook I mount a size "0" willowleaf spinner blade on the bend and secure it with a

pinched on split bead, small size. On a snap swivel, I place a suitable size 2 or 3 colorado or indiana blade, then the hook. This gives me a workable combination, but one too light for proper casting. So I snap a short solid connector into the eye of the swivel snap and squeeze a No. 3 removable splitshot on the connector.

I prefer the removable splitshot to other forms of weighting because in addition to giving me the required casting weight in the shortest distance possible, because of their design, more weight is below the shaft on which they are mounted so that they also act as a keel in keeping the lure from twisting the line.

I also fish a considerable number of spoons throughout a season. I make a real saving by assembling these myself. The spoon that would cost me between 50 and 65 cents over the counter, averages out at between 10 and 12 cents when purchased by the dozen without hardware, meaning without split rings and a hook. Any spoon fisherman will appreciate what a savings this can amount to in the course of a season.

In summary, I am highly enthusiastic concerning my tackle tinkering proclivity. It provides me with greater pleasures while fishing, saves me a considerable amount of money, and provides me with a wealth of entertainment on those long winter evenings that can drive a fisherman nuts!

Tackle tinkering is a great game. I'd recommend it to every rod-bender as the best part of fishing. There's no thrill to equal the one you get when a fish hits a lure of your personal design and assemblage. *Take it from one who knows.*

Let's Change the Motorboat Laws

continued from page 11

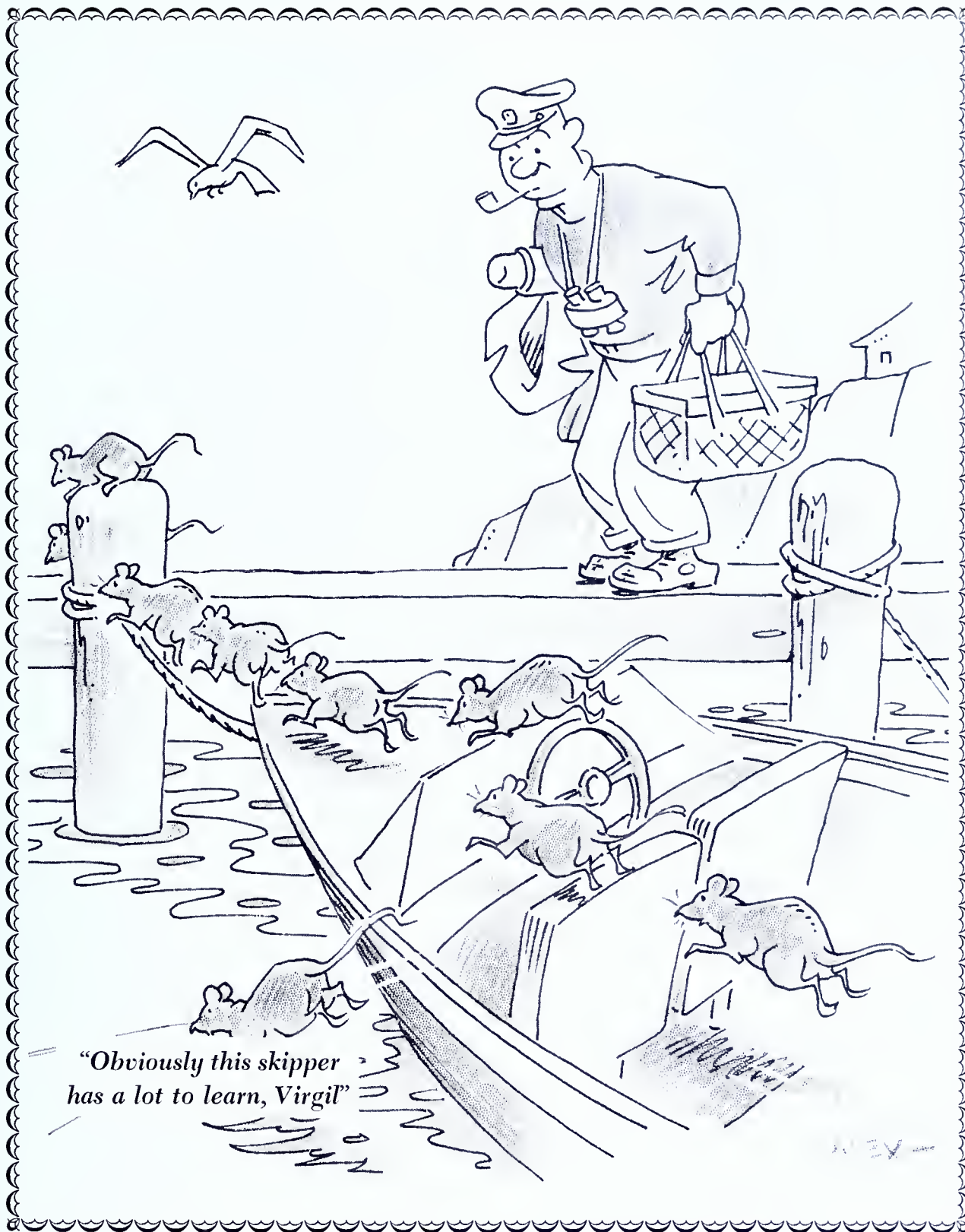
proper court and settle the matter rather than receive a summons in the mail and be required to travel to court on a work day several weeks later.

9. *Settlement on field receipt.* We had requested in HB 1496 authority to settle cases on field receipt, in the same manner fish and game violations can now be settled, when the offender prefers to do so. This would save court costs and time in those cases where the offender knew he was guilty and wished to settle at once. We are again reviewing the request for that change inasmuch as violations of the Motorboat Act are not yet subject to fixed fines but might vary from 5 to 100 dollars as determined by the court. There are advantages to having a fixed fine for each offense, although the circumstances surrounding each offense might vary considerably and should be treated differently. The sliding-scale allows the court to treat differently the cases of repeated offenders; aggravation because of multiple or serious violations; or an improper attitude.

Generally, except when referring to *registration*, the term "motorboat" will be changed to "vessel" to make it clear that operators of all craft must equip, light and operate their boats with regard to the safety of those in the boat (as well as to those in other boats) and the authority of the Commission to make special rules to meet varying local conditions will be broadened.

The "good Samaritan" provision of the new Federal Act which holds harmless any person who in good faith and without charge renders assistance at the scene of an accident without objection from the person being assisted has been incorporated into the 1972 Regulations—this was possible without a change in law.

Some feel that our proposals must be enacted in separate, piecemeal fashion . . . and we may have to settle for that. But hopefully, Pennsylvania boatmen who understand what we are asking for in the way of changes—and *why*—will agree to their desirability if we are to keep boating a SAFE FUN SPORT in Pennsylvania . . . *equitably funded by all who enjoy it!*



SAFE BOATING IS NO ACCIDENT—*BUT*:

We can build a safe boating program,
and show that it surely pays;
We can plan for boating safety,
in a hundred different ways;
We can hang our safe boating posters,
far and wide . . . in every place;
We can quote our regulations . . . until
we're purple in the face!
We can hold boat safety meetings
Saturday . . . Sunday . . . every week;

And nod in mute agreement
while we hear our instructors speak.
But we'll never be—completely safe,
until ALL HANDS BELIEVE!
Join the "SAFE BOATING" movement,
RISE UP ABOVE THE THRONG!
As YOU set a good example . . .
OTHERS WILL GO ALONG!

Joseph Dick
Waterway Safety Coordinator
Region II, Somerset, Pa.

turn back to page 29—enroll in one of the SAFE BOATING courses listed there.
HELP KEEP PENNSYLVANIA THE SAFE BOATING STATE



ODE TO A WINTERTIME TROUTSTREAM

by JOHN F. BUSCH, JR.

Where have they gone?

Those who stood on her banks last spring with upturned collars to ward off the wind while scanning the surface of the first pool for the barest possibility of a rise.

*snowflakes falling . . .
anticipation lingering.*

*The bardy anglers who opened the season in the April's chilling rain . . .
pushing against relentless currents.*

*Here and there a patch of green . . .
fresh air . . .
the first robin.*

Those who matched the hatch in May—and paused to observe her bankside violets and marsh marigold.

*Warm sunshine . . .
shirtsleeves
. . . the bursting of buds.*

Where have they gone?

Those who kneeled in her ankle deep water at the tail of a pool on a June evening and watched the brown trout roll, to surface feed on mayfly spinners.

*Long lazy evenings . . .
the valley all in green.*

Those who could not resist walking her banks and wading her pools in hot July.

*The water now low and clear . . .
lifeless by day . . .
alive and responding by night.*

*Those who saw her in August, shoreline receding, boulders exposed . . .
sometimes ugly.*

*Here and there just a trickle of water . . . a cloudburst will make things right again.
Deep blue skies . . .
summers end.*

Where have they gone?

*Those who watched the bold and confident rises in late September . . .
matched only by the beauty of healthy, brightly colored fish, brought to hand and released . . . to rise again.*

*Faint color changes in bankside foliage,
the stream sparkling, full, and deep.*

Those who took in her almost unbelievable beauty and solitude in October . . . the sun-drenched leaves of rust and gold, now past their peak of brilliance. The far off drone of a jet engine . . . the rustle of a chipmunk in the dry leaves.

*Large fish to test the tackle,
waiting for things to come.*

Those who observed her spawning redds in November in the shallow riffles accented by slanting autumn sunlight. The egg-laden trout satisfying an urge surpassed only by that of survival.

*The comforting thought that streamlife goes on . . .
a new crop of fry awaits the springtime angler.*

Where have they gone?

Those that spent December evenings with fly tying, rod building, and Christmas packaging. Thoughts are turned to decorative surroundings and festive parties.

*Holiday greetings . . . another
new year.*

It's been weeks since they took in all of her charms. No booted foot breaks the thin shore ice rimming her spring fed pools. The stream and its banks are covered in white.

*Stark, quiet, deserted . . .
Where have they gone?*

PENNSYLVANIA

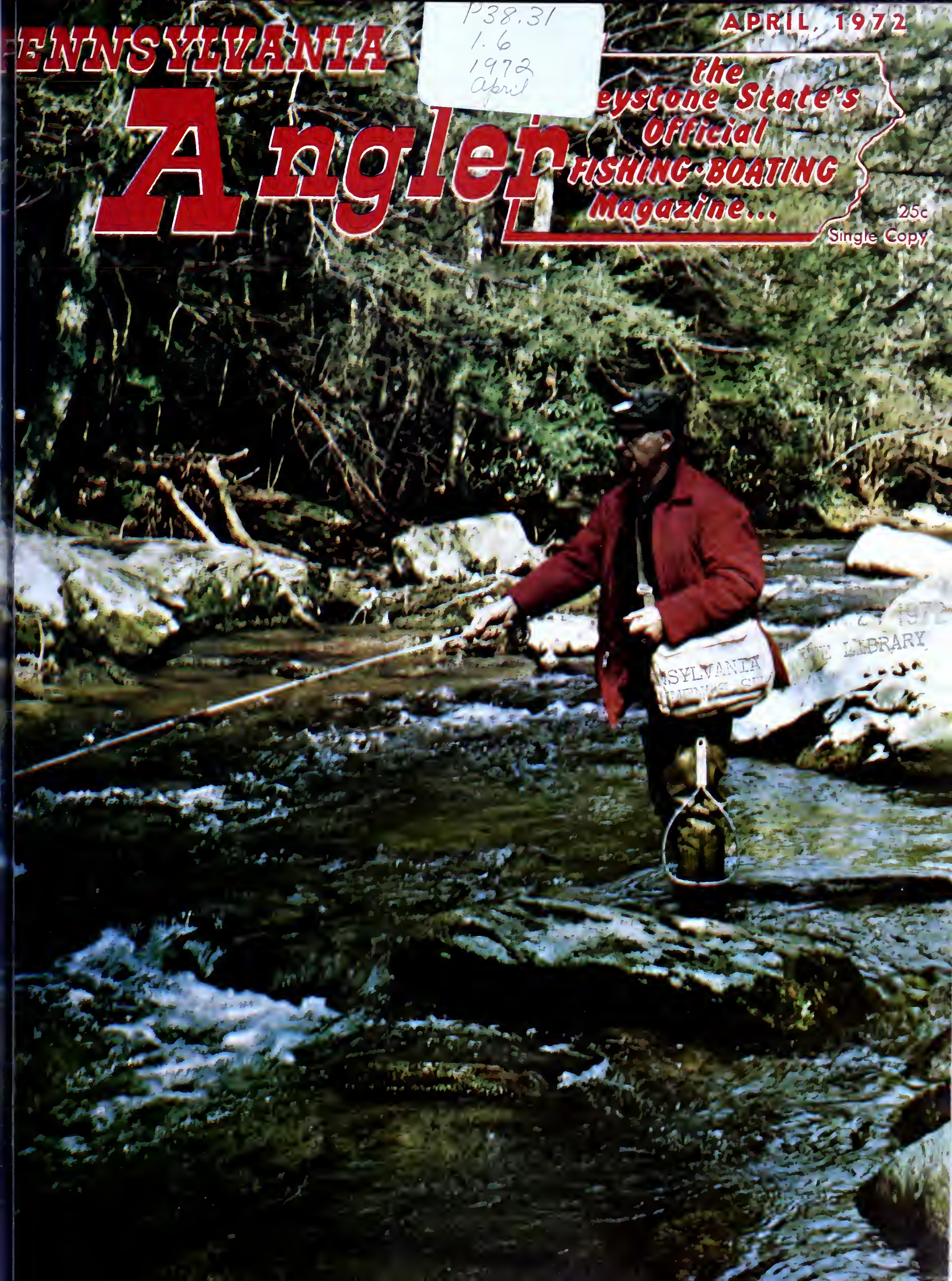
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APRIL, 1972

the
Keystone State's
Official
FISHING-BOATING
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“The Thin Green Line”

We recently coined a phrase when we called our force of Waterways Patrolmen “The Thin Green Line.”

Two different sessions of the Legislature passed laws amending Article I of the Pennsylvania Constitution to add Section 27 which reads:

“The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and esthetic values of the environment. Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.”

The amendment then passed a referendum where one million Pennsylvanians voted for this amendment to the Constitution . . . against 250,000 who voted against it. This amendment is a great step forward in assuring for ourselves and our posterity a natural environment of quality, rather than relegating ourselves to extinction . . . or a mere survival level of existence. This is coupled with Act 222 which contains the 1970 amendments to the Clean Streams Law of Pennsylvania and holds forth as one of its objectives—“not only to prevent further pollution of the waters of the Commonwealth, but also to reclaim and restore to a clean, unpolluted condition, every stream in Pennsylvania that is presently polluted.

When the general public thinks of anti-pollution laws, I am sure that they envision a mighty force of inspectors and pollution detectives patrolling our waterways and reporting pollution at the instant it occurs. Such a force does not exist in the Department of Environmental Resources where very few water quality specialists are actually in the field looking for pollution and potential sources of pollution.

Our Waterways Patrolmen . . . 75 men in green . . . are the official reporting agency for the Clean Streams Law as well as Section 200 of the Fish Laws!

THIS is the Thin Green Line!

When a fisherman buys a \$5.00 license, or a boater pays for the registration of his craft, he is helping to maintain this protective line not only for the benefit of his own sport . . . but for all the citizens of the Commonwealth of Pennsylvania.

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PENNSYLVANIA

ANGLER

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APRIL, 1972

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JAMES F. YODER, Editor / **CHESTER A. PEYTON, Circulation Manager**

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STATEWIDE with the EDITOR

PRACTICALLY every day we receive four—maybe five or more pictures from our readers showing the nice four foot muskies they caught . . . and I just sit here and eat my heart out. Unfortunately, the limitations of our "FISH TALES" section prevent us from ever getting caught up—there are literally that many trophy fish being caught here in Pennsylvania! The unseasonably warm weather of last December and January brought in more trophy muskies than any similar period we can remember!

I suppose when photographers, amateur and pro alike, see something like we've got ON THE COVER this month, they too feel those pangs of envy that I mentioned above. There is *that special something* about making a "cover" photo . . . it's a real achievement to the camera buff.

Really, it's a matter of being in the right place, at the right time, with the right thing . . . a camera, in this case. Otherwise, is it really any different from fishing? Last fall, I tried a pool below a riffle on the Susquehan-

na for twenty minutes and walked away. Another angler, below me glanced up as I passed. "Anything?" "Nope." "I've always had good luck up there, mind if I try?" "Nope, I'm finished!" In ten minutes, my friend had a walleye—I had everything he had . . . only my timing was off!

When you happen along the beautiful Conewago Creek in Adams County, as I did, the sun spilling all over the countryside, and along comes an angler smoking a pipe, wearing a bright red jacket and watching his line as though the longest trout on record is about to be caught—you've got yourself a picture!

On the OTHER SIDE OF THE COIN—if you haven't seen or fished the Conewago, I'd suggest you try this particular section that parallels Route 234, just northwest of Arendtsville. Take a camera, BUT—what I haven't told you is how carefully you'll have to choose your camera angle to get a picture like the one on the cover or below.

You'll find a can here and there

. . . maybe some sandwich wrappers, but these are easily removed for the picture. The real problem is the graffiti that graces the otherwise spectacularly beautiful, boulder filled, glen. The best scenes are the most difficult to photograph! I'll admit that some of the only knowledge we have of our predecessors on this earth came down to us in the form of similar scribbings on similar rock faces the world over, but it escapes me why "Tom Loves Jane '67" is so all fired important to posterity that it had to be done in non-washable, non-degradable, everwearing spray paint! In fact, if "Tom" has since married "Freda"—he's in big trouble!!!

I have a feeling by the time you get down there, some F&G club with a handful of wire brushes will have returned the glen to its original beauty. Adams County folks are proud of their countryside . . . rightfully so. WHODUNIT? It wasn't a fisherman . . . I've never seen a fisherman with a can of spray paint in the tackle box . . . have you?





KEEP UP THE GOOD WORK!

I have been a subscriber to the Pennsylvania Angler for a year and a half and have found this magazine very enjoyable. In regard to your September and October issues, they were fabulous! I really enjoyed the articles on the sport of fall fishing, especially Tom Eggler's article "Challenging Trout" in the October issue.

I would also like to give credit where the credit is due to the entire Pennsylvania Fish Commission for their great job of keeping our lakes and streams free from litter and well-stocked with fish throughout the year.

STEVE TIMKO, W. Aliquippa

OH! OH! NOW WE DID IT!

This letter is in regard to the handyman's special in the December ('71) issue of the Pennsylvania Angler.

Exactly two years ago, December, 1969, I had a story printed which was titled, "Beaver County's Custom Rod Maker," written by Mr. Don Parrish, WWP of Beaver County.

I feel the handyman's special in this December issue was an attempt to ridicule the story and myself. After reading the article, I hope no one attempts to try to build a rod from the misinformation contained in the article. They are in for wasted time and effort.

First of all, I am the first to admit that I am an amateur craftsman; although I have been making split bamboo rods for ten years, I have a long way to go to be a craftsman in the art of making split bamboo rods.

The gentleman who taught me had 40 years of experience, and he told me many times that he had a lot to learn. So please draw your own conclusions.

The article in the December issue didn't even scratch the surface of the rod making trade. As only one example, he omitted or doesn't know that there are 14 different tapers from

which to choose when planning to make a rod. Each taper has to be in its own section of the rod to make the rod a success. For instance, a dry fly rod is tapered in different sections of the rod than a wet fly rod. I won't name them all as it would take up too much space.

Back in 1845 a man named Samuel Phillippe made the first split bamboo rod. He was born in Reading, Pennsylvania, but later moved to Easton, Pennsylvania, where most of his work was done.

He didn't have propane torches nor aluminum tubes to so call cure his strips and his rods are being used to fish with today.

Anyone having any knowledge at all of split bamboo rods can take a magnifying glass and look at the so called finished section in the last photo of the article and he'll note there are no strips touching each other in the middle. I would put a finished section like that in the furnace and burn it as I'd be ashamed to have anyone see such inferior work.

Amateur? Yes, I am. But I am a precision amateur who has a lot to learn.

Everything I wrote in the above letter I can prove or have it confirmed if anyone wants.

JOSEPH KOVACH, Monaca, Pa.

Joe, we disagree most heartily with your third paragraph—no "ridicule" intended whatever. The author has apparently built rods by the methods stated and was willing to share his apparent satisfaction with others. By the same token, we are printing your letter in its entirety because of the number of inquiries we've had in response to the article in question and in respect for your feelings. I do not doubt your craftsmanship at all, but as in every facet of American Industry, we have come to expect—and accept varying standards of excellence—according to our willingness to accept the price—he it in "folding green" or the amount of time and effort expended to obtain a "Good," "Better," or "Best" grade.

A number of our readers have shown interest in "Splitting Their Own Bamboo," and I would suggest that anyone seriously interested in fashioning a rod of their own, write you directly. Ed.

TROUT TOO CLOSE?

Enclosed please find money order for \$5.00 for three years of your excellent magazine. The Fish Commission is doing an excellent job so please keep up the good work.

I have visited some of the access

areas in our vicinity especially the Wallenpaupack access and can only rave about them. With all the access areas and lakes under Fish Commission control I can only say we should count our blessings. I wish to commend Waterways Patrolman Robert Fasching for the excellent job of trout stocking he did this past season. It seems he has put a trout in back of every rock! No one should complain about the fine fishing we have in Pennsylvania.

JOSEPH VISOSKI, Scranton

Thanks Joe! Actually, Waterways Patrolman Bob Fasching was instructed to put a trout in back of every OTHER rock—we'll get back to him on this! Ed.

A BOAT FISHERMAN

I enjoy your fishing magazine very much and look forward to each month's publication. Recently an article caught my eye, the one about Locust Lake, and Tuscarora State Parks (November) because I have visited them both, and also they mentioned the town of Brockton where my grandfather lives. (He gave a subscription of the Angler to me as a Christmas present.)

Both of these parks looked very nice and I was pleased with the work done on them. A great credit to the Commission.

When looking at Tuscarora State Park, I noticed a soda can in the water when no more than ten feet away a trash can was stationed. It's a shame that so-called sportsmen ruin our waterways and fishing with litter and other pollutants.

Another thing in the Angler that caught my attention was the number of Anglers complaining about boating articles. If some of those anglers would recall, I'm sure they have once in their life fished in a boat and have gotten to "private" fishing holes in boats where they couldn't have waded or cast from shore.

Again a thanks to a great job the

continued on page 40

Letters to the Editor which are printed in the Leaky Boots column do not necessarily reflect the opinion of the Pennsylvania Fish Commission. Contributions to this column should be brief and are subject to editing with respect to length and timeliness of content. Please type, print, or write clearly.

What's fishing in Pennsylvania going to be like in 1980? In 1990? In the year 2000? What is the Fish Commission doing to insure that fishing will be available for generations of future anglers? In order to answer those questions we've got to look at what has been done in the past, what we are doing now, and what is planned for the next few years. The future, as did the past, depends on three basic factors. First, plenty of clean accessible water. Second, fish for these waters. Third, management of these fish and their waters.

First let's look at the water situation. Back in the early sixties, Pennsylvania's 45,333 square miles were covered by 288 square miles of inland waters. Today we are nearing 350 square miles of inland waters and almost all of these new waters are open to public fishing. Creation of new impoundments by the Department of the Interior for flood control; Dept. of Environmental Resources for recreation; and by the Fish Commission, Game Commission, Soil Conservation Service, and by local government has greatly increased the number of fishable waters. Today, the Fish Commission owns, leases, or controls, over 12,000 acres of waters

—lakes, ponds and streams. Certainly this acreage of new fishing waters will continue to grow.

Access to new bodies of water has not been much of a problem, this is taken care of in the planning stages, prior to construction. Access to our rivers and larger streams causes the most concern. Over the years our Real Estate Division has gone about investigating and acquiring access sites on the recommendation of District Waterways Patrolmen, sportsmen and other interested individuals. In the fiscal year of 1969-70 they checked out 115 of these proposed sites for possible acquisition. Today the Pennsylvania Fish Commission owns 170 access sites on lakes, streams and ponds scattered all over Pennsylvania . . . and there are more of them to come.

Development and construction of Commission lakes and access sites, building and renovating our hatcheries and maintenance of these facilities is in the hands of our Engineering Division. This very small group of able technicians won the 1970 award for small governmental agencies that is presented annually by the Pennsylvania Society of Professional Engineers. Among their many accomplishments were planning, de-

signing and completing many new Fish Commission Dams; renovating and development of our hatcheries; surveying, planning, developing and maintaining access areas and other properties owned by the commission. All of these will have a definite bearing on fishing in the future.

What about water quality? When you read the annual report on pollution and fish kills in the United States—Pennsylvania always heads the list. That's not quite as bad as it sounds. We've got more water and fish than many states and that's a plus; we also have more industry than most and that is both a plus and a minus. The biggest plus on our side is the best investigating and reporting system anywhere in the U.S.! Even the smallest pollution is soon noticed by students, housewives, policemen or sportsmen—and word gets to the proper authorities quickly. The Waterways Patrolman with a representative from DER and possibly the County Health officer make a complete and detailed investigation. Where negligence is responsible for the pollution, the violator is penalized and the situation is corrected. Today everyone, industry included, realizes the critical need for clean water. With sound legislation and



FISHING OUTLOOK

By.. Stan Paulakovich

Access to the Susquehanna River is provided by the Montgomery Ferry site shown here. Fishermen, boaters and hunters can launch here and enjoy the good fishing and duck hunting available in the area.





Renovations, such as these new concrete raceways at the Huntsdale hatchery in Cumberland County, are a small part of the overall program to bring each installation up to an efficient operating level.

more public awareness, we are making good progress in solving these problems.

Pollution has been with us for over a hundred years and it won't be turned off over night. It will take time and money—but it will be cleaned up. Some of our waterways that for years were so polluted that nothing could live in them are being up-graded to the point that they now support fishlife. The lower Monongahela from McKeesport to Pittsburgh, the west branch of the Susquehanna in the Lock Haven area, and the Lehigh River, from Tannery down to Jim Thorpe, are notable examples of streams where fish and aquatic life are beginning to establish a foothold as a result of improving water qualities. As this trend continues, more and more waters will become available for fishing.

Second factor—the fish themselves. The most remarkable gains have been made here. Thanks to Project 70, Project 500 and the Earmarked Funds (Act #458 of 1963) we have been able to do some extensive remodeling at our hatcheries. These have been (or soon will be) modernized and up-dated to meet today's requirements. We have acquired the Oswayo Hatchery in Potter County, the Walnut Creek station in Erie County and just recently completed the Big Springs Hatchery in Cumberland County. With the nine hatcheries that were in operation this creates a tremendous fish production complex for meeting future needs.

Add to these Commission owned facilities the present day total of 160 Cooperative Nurseries throughout the state. Last year these CO-OPS stocked over 600,000 trout in public waters! Fingerlings supplied by the Commission are cared for, fed and stocked

by sportsmen. Some of these as *two* and *three* year old fish. Bob Brown, coordinator for this project, foresees the possibility of 200 such nurseries in the next decade. He also predicts that more WARM WATER co-ops will come into being now that the one Largemouth Bass nursery has proved workable.

New methods for spawning fish, hatching eggs, and feeding and raising the fish have certainly increased production at our stations. Our research Biologists and the hatchery employees have come up with some great ideas over the last few years. Air-spawning, hatching eggs in a jar, raising fish in a barrel, and then the silo. Self cleaning screens, "Christmas tree" aerators, mechanical feeders, the "lighthouse," recirculation techniques and pond alignment for simplified automatic feeding. All of these make it easier and cheaper to raise fish.

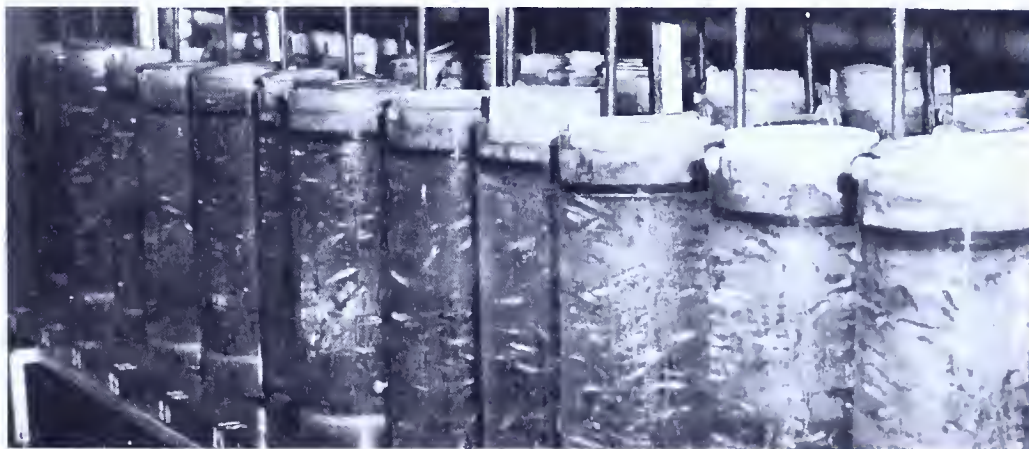
Warm water technology has likewise advanced in our hatcheries. For instance, back in 1954 when we first started an extensive Musky program

only 5% of the eggs taken were successfully hatched. Today 85% of the eggs hatch and result in a tremendous increase in the number of fish stocked. We have been able to introduce this fine game fish all over the state. Last year over 1,000,000 Musky fry and fingerlings were stocked in Pennsylvania! Northern Pike, Chain Pickerel and Walleye have likewise been successfully spawned and stocked. Because of the cost involved in raising these fish (they must be fed live food) most of them are stocked as fry. A team of men working out of the Linesville hatchery one Saturday last April accomplished the following: two men manned the net barge and emptied the traps of fish and kept the holding tanks in the hatch house filled with Walleyes; a third man spawned the females of their eggs; a fourth man stripped the males of their milt and fertilized these eggs; a fifth man kept the eggs stirred, "feathered," and measured for the hatching batteries. From 8:00 A.M. until noon they prepared 25 quarts of eggs for hatching. At 140,000 eggs to the quart this represents 3½ million Walleyes! If only 1% of these survive to adulthood, 35,000 additional fish have been made available for future anglers! NOT A BAD FOUR HOURS WORK!! All of the "spawned-out" fish were returned *live* to Lake Pymatuning when the operation was finished.

OPEN HOUSE will be held on Sunday April 9, at the new Linesville Hatchery and Visitors Center. If you are anywhere near this area on that date, make it a point to be there. Spawning methods, hatching equipment and techniques, use of anesthetics, trapping and hauling procedures, sorting, sizing, tagging and

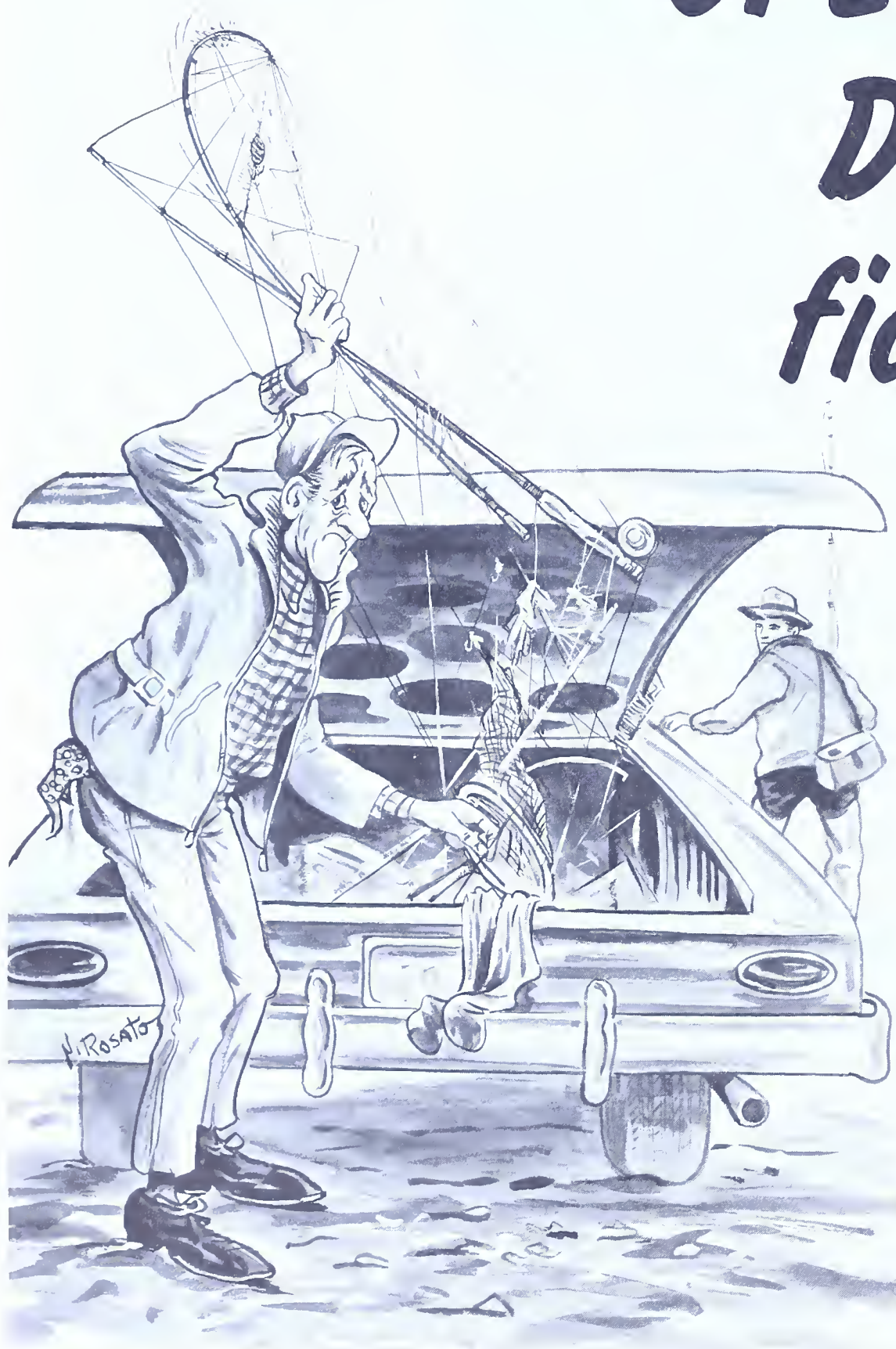
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Research continues at the Benner Spring Station. New methods of rearing fish often have their beginning here. The goal? Higher production at lower cost; the development of superior strains; the elimination of diseases common to fish culture.



How To
AVOID

AN OPENING DAY fiasco



by
George E. Dolnack, Jr.

A lot of fishermen spend more time during the long cold winter months thinking about the opening day of trout season than preparing for it.

Finally, when the big day arrives, the gear that was stored at the end of last season is dug out and tossed into the joyful angler's car. And off he goes with visions of an opening day limit in his creel by noon.

What this happy-go-lucky fisherman doesn't know is that he has already sealed the fate of his opening day. For he is doomed to spend much of it making repairs to broken down fishing gear, searching for tackle that comes up missing at the last minute and in some cases, he even discovers that he has misplaced his fishing license or worse yet, has failed to purchase one.

There is much moaning and groaning by the hapless angler and the most frequent complaint heard from him is, "They don't make things like they used to."

Of course, this is just a cover-up for his own carelessness for not keeping his fishing gear in tip-top shape.

How can you avoid a first day fiasco? Simple. Just practice a little common sense preventative maintenance on your fishing gear. This is both an in-season and off-season job, but the more time you spend doing it during the off-season will mean less trouble and more fun in-season. Your preventative maintenance program will help some of the long winter nights to pass quickly and give you hours of pleasure.

No angler likes to fish with a boot full of ice cold water—especially on opening day. Yet, despite all the admonishment and advice given about the care of boots and waders, this problem seems to plague all fishermen at one time or the other.

Most leaks are caused by the improper storage of rubber footwear, particularly during the off-season.

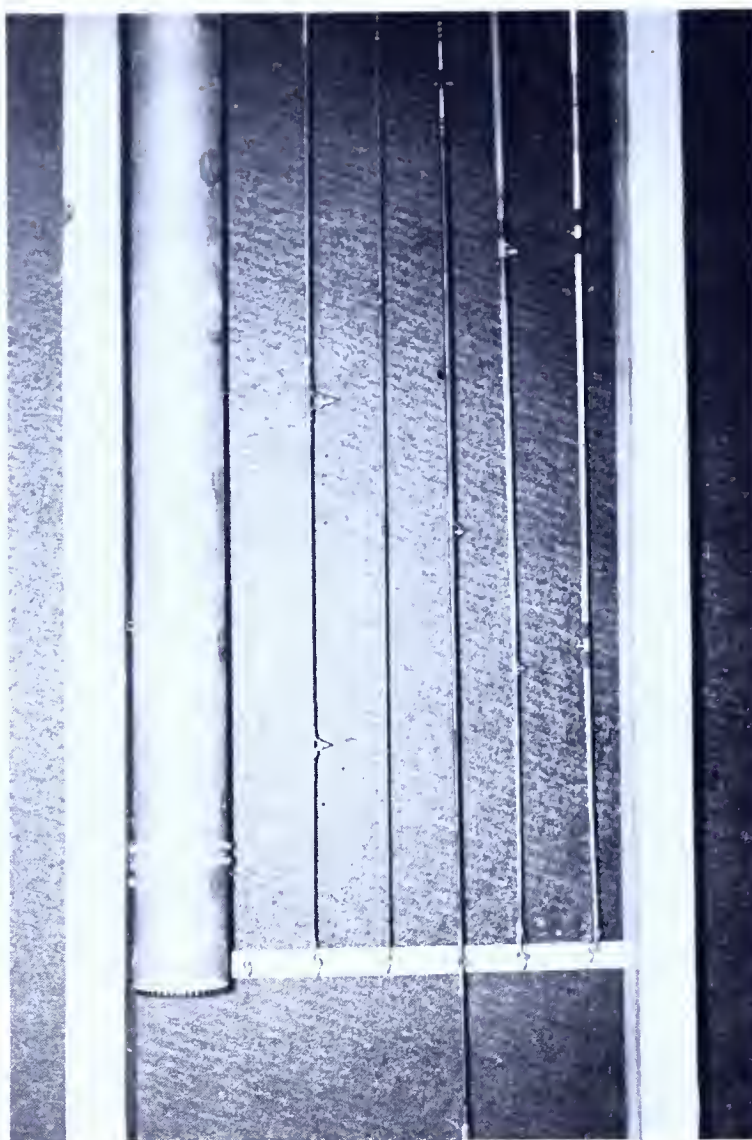
Natural and artificial light, heat and air have a deteriorating effect on rubber footwear even though treated with anti-oxidants and age-resistors during manufacturing. So get those boots and waders out of the light and out of the trunk of your car which can be hot as a furnace at times.

For prolonged or off-season storage, roll the boots or waders up, being careful not to fold or crease them. Place them in a large shopping bag or other suitable container, seal it and store in a cool dry place. Before storing, wash the outside of the boots with soap and water and rinse.

Avoid folding rubber footwear because sooner or later cracks usually develop at the fold where they start to leak and eventually tear.

Other leaks caused by encounters with broken bottles, bass plugs or barbed wire fences are easily and quickly repaired with a tire patch kit, another small investment that pays big dividends.

When not in use during the season, store boots out of direct sunlight on boot hangers which can be purchased for less than a dollar at most sporting goods stores. A suitable pair of hangers can be constructed



Store assembled rods in a vertical position using a wall rod holder or make this substitute out of a piece of furring strip and cup hooks as shown here. A rigid tubular rod case used for transporting and storing rods can also be suspended from a cup hook.

from a piece of heavy galvanized clothes line wire.

One other word on boots and waders. Check the straps or suspenders. There is nothing more uncomfortable than having one break in mid-stream! This usually means a trip back to the car or camp to dry them out.

Proper care of creels will extend their life and serve you well for many years. The same wicker creel has lasted me for over twenty years and I have only recently replaced its lid strap.

To preserve your creel, apply a leather conditioner to harness straps and other leather parts of the creel at the beginning, middle, and end of the fishing season.

Wash the inside of the creel periodically throughout the year with soap and water, rinse and store in a dry place.

It's also a good idea to apply a sealer to both the inside and outside of new wicker creels and to those that have never been treated. After the sealer dries, coat with varnish. Re-coat with varnish about every three years or whenever it looks like it is needed.

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The Brown Trout . . .

a prize catch anywhere, but no other Pennsylvania stream offers a challenge quite like—

THE THREE FACES of the CALDWELL

by

John F. Busch, Jr.

The angler stepped into the shallow water at the tail of the pool and glanced at the fast riffle coming in above. Then he let his gaze trail down to the medium speed, broken surface, currents. Was that the flick of a rise? A false cast . . . and then a concerted push put the fly on the mark. The fish came in a bulging swirl but didn't take. The fly bobbed and floated another foot, then a booming rise followed.

He brought the trout, a brown, to hand and marveled at the bright red spots, yellow belly and firm flesh. He released it in the quiet water at his feet . . . and watched it swim slowly back to its lair.

He paused at the water's edge for a moment of contemplation. He liked the valley and realized that it contained some of the last vestiges of a near-wilderness. The awareness that deer and turkey still inhabited the surroundings did not distract from the feeling of contentment.

A "Dream Stream" was the way that N. R. Casillo, writing in the PENNSYLVANIA ANGLER many years ago, described the Caldwell. His phrases were sprinkled with praises—"a stream endowed with an abundance of physical features", "richly gifted" and "a great personality". The Caldwell provided the basis of the theories and testing of angler, author, and inventor, John Crowe in, "The Book of Trout Lore", during the '30s and early '40s.

The Caldwell is *unique*. Rising out of the foothills of the Alleghenies in Warren County, it flows gently and casually . . . almost unhurried, through woodlands abounding with beech and hemlock. The tiny descriptive hamlets along the way: Garland, Fiddlers-green and Grand Valley, lend a touch of beauty to an already legendary valley.

The stream, small and tumbling at its source, contains a native brook trout population. Continuing south, the little river picks up its largest tributary, the West Branch, below Grand Valley. For the next seven miles before joining Pine Creek, only two small feeders, Stoney Hollow and Porkey Run, add to its charm. It is in this stretch that Crowe worked his magic with the flyrod. He vividly described the Caldwell and the fine brown trout he captured from it. During the 1941 season, which ended on July 31st that year, over fifty percent of his angling days were spent on the Caldwell. I would guess he knew the water better than any angler . . . before or since.

The water has not changed significantly in the years that have gone by, but stream management has, and this too, makes the Caldwell unique. *It is the only stream in the Commonwealth that has a variety of regulations to appeal to every segment of the angling public.* The lower water above its juncture with Pine is open water and can be fished with *fly, bait or spinner*. A mile and one half stretch in the middle below Selkirk bridge is classified as *Fly Fishing Only*. In the upper reaches, the West Branch upstream to Three Bridge Run, is set aside as *Modified Fish for Fun*. This is the only Fish for Fun stream in state that is not stocked and features brown trout fishing for wild fish. Also it is the only stream so designated that is entirely in its natural state. This section is the product of cooperation between Trout Unlimited, the Fish Commission, landowners and sportsmen. It is a credit to the Fish Commission for its far sighted management in adopting the three sets of regulations and for creating this variety of angling on the Caldwell. It has proved entirely successful and enforcement problems have been negligible. It is the fervent hope of this writer that this kind of management will be considered on other quality streams across the state.

For the dedicated fly fisherman the Caldwell offers the usual eastern aquatic insects, although not as prevalent as on the streams in the north central Pennsylvania counties. The Early Stone fly produces the first splashy risers in early April followed by the first of the mayflies, the Little Blue Dun (*Paraleptophlebia adoptiva*). In the Spring of 1967, I charted this insect emerging over twenty-eight consecutive days. Overlapping at the end of April comes the Hendrickson and Red Quill (*Ephemerella subvaria*), sometimes in fair numbers, but most often not. One of the highlights of aquatic activity on the Caldwell

is the fairly heavy emergence of the Pale Evening Dun (*Ephemerella dorothea*) which is on the water for three weeks or more. I consider *this* the best fishing hatch of the season. Oddly, it is most prevalent on the main stream rather than its upper reaches. The trout move into the extreme shallow riffle water to take the emerging caramel colored duns and some fine sport is available. During this hatch, and following sporadically, the big cumbersome March Browns (*Stenonema vicarium*) accounts for some very good fish. This hatch gives way to the fabled Drake (*Ephemerella guttulata*) about June 1st. Significantly, the emergence of this insect has been on the increase the past few seasons. By contrast, the fine fishing that can come with the Grannom (caddis) is not available on the Caldwell, but shows up in great numbers on other waters in the immediate area.

The beauty of the stream and the valley through which it meanders entices many early season anglers to walk the banks and wade the pools. But the quiet and solitude to be found in a day's fishing in mid-season is never more evident anywhere than on the Caldwell. It is not unusual to see a doe cross a shallow riffle on a bright, clear summer morning or a fawn, wet and shivering, slipping and sliding on the rocky streambed on a wet, blustery, spring day. Perhaps this is what entices anglers from near and far, Pennsylvania and Ohio, to come back again and again.

Biologists have labeled the Caldwell an *average* stream in the soft water category, but anglers that know the water intimately, know better. Those that have watched the fine browns rise to whatever insect activity is present; the large patches of marsh marigold along its banks; and the intense spawning activity on a crisp autumn day—they know better too. The Caldwell is not an *average stream*!

As Casillo aptly put it—"Select the best features from a dozen favorite streams and the chances are you'll find them duplicated on the Caldwell."

Erie's Dave Ekelund takes early season brown trout from open water.





*Try it . . .
you'll never forget it!*

THE B R O K E N S T R A W

by Don Neal

*illustrations by
Molly Ulsh*

It was Bill Long, an adventurous hunter of wolf scalps, who was credited as being the first white man to walk the trail that led from Buckaloons on the Allegheny River to Fort LeBeouf on upper French Creek and coursed the wild valley through which flowed the Brokenstraw Creek. And while his interests may have been directed more to the wolf packs that roamed the area, and the bounty their scalps would bring, he described the valley as *wild and beautiful*, and the creek as being "plentiful of fish."

The valley has changed since the days of Long. Replacing the wilderness beauty the bounty hunter so admired is the rural beauty of spreading farmlands set off by low-lying hills covered with second growth hardwood forests. But the stream remains much as Long described it; plentiful of fish, a series of fast riffles and deep placid pools, and with a water quality far above average in our modern world.

Ask any of the devout regulars who frequent the Brokenstraw's environs why it rates their persistent attention and they will tell you it is a trout fisherman's paradise—both esthetically and productively. One Erie angler, an exceptional dry fly fisherman, claims that the stream is *too well populated with trout*. His reasoning being that the number of fish he can catch on a given visit indicates that forage may be lacking. Few of the Brokenstraw fishermen, however, express similar views. But few of them are the fisherman the "concerned" gentleman is, either.

The lower section of the stream, the portion between the "Straw's" confluence with the Allegheny River at Buckaloons and as far upstream as the treatment plant at Youngsville, can be classed as non-typical water when compared with the mid-section extending from the treatment plant to the mouth of Spring Creek. The course is flatter, the water is warmer—and the stream is not too accessible.

This section does, however, produce some big brown trout and due to the warmer water, provides some excellent smallmouth and walleye fishing. Many favor it more for the trophy-sized trout available—than catching the limit.

It is above the Youngsville treatment plant that the average fisherman finds the kind of trouting that keeps him coming back to the Brokenstraw time after time. While this section of the stream passes directly through the center of the town, it in no way lacks the ability to fill a fisherman's creel or satisfy his esthetic values. A fact that becomes quite evident during the early days of the season when hopeful anglers accumulate there in considerable numbers.

But the more dedicated trout fisherman will find a section of the stream extending from the town's upper limits to a bridge that crosses the stream a country mile or two upstream more appealing. It is here that the stream ox-bows away from roadways and residential congestion, discouraging the less avid fisherman, but providing an excellent stretch of trout water in a near-perfect esthetic setting. An abandoned railroad grade paralleling this portion of the stream

continued on next page

makes travel by shank's mare a not too difficult task.

From the bridge, the Cooper's Crossing bridge, all the way up-stream to Pittsfield the stream is the type of trout water an angler can dream about . . . but seldom see. Fast riffles, placid pools, and fairly deep rock-bottomed runs provide ideal habitat for the trout and they show their appreciation by keeping this section of the stream well populated.

A hard surfaced road close to the stream offers good traveling all the way to Pittsfield on the right bank (moving upstream), and the abandoned railroad bed offers an access route along the left bank.

It is at Pittsfield that the famed Little Brokenstraw separates from the main stream. This is an important tributary preferred by many who like the smaller streams, yet it is a stream of good size and every bit as "trouty" as the parent stream. Route 6 travels the length of this stream, providing excellent access to its entire length.

Above Pittsfield to the Coal Hill bridge, the Brokenstraw retains its every attractive characteristic. However, easy access is not the most laudible feature of this section. Access from Route 27 at most points is down a steep bank, while on the opposite side of the stream the abandoned railroad bed is separated from the stream by wide cultivated fields. But for those who brave the difficulties of reaching the stream . . . the rewards usually equal the effort expended.

It is at the Coal Hill bridge that the fly fishing only area starts and continues all the way to the village of Garland. Needless to say, this section of the stream gets a big play from the "elite" of the trout fishing fraternity (the fly fisherman, of course) and is a highly productive area well into the summer season. By late June, however, stream temperatures apparently reach a point where the trout of the main



stream seek the cooler waters of nearby tributaries.

Here again, though, is a section where the best means of access is via the abandoned railroad bed. This presents no handicap, as almost the entire length of fly fishing area can be viewed from the grade, allowing the fisherman to select a starting point suited to his particular purposes. Although the stream is so "trout-ably" perfect at this point the selection of one location over another can be frustrating!

It is the section of the Brokenstraw upstream from Garland to where Spring Creek enters the main stream that draws the most fervent recommendations from George Jones, local Waterways Patrolman. And a personal endorsement of his views would not be out of order. I have fished the Brokenstraw from top to bottom and I have always favored this section of the stream—mostly in the vicinity of Deer Head Inn. George, however, isn't partial, he rates the entire section as "great"—and perhaps it is.

So far as trout fishing is concerned the stream above the mouth of Spring Creek is far from being a fisherman's delight. It is here that the character of the stream changes and becomes a series of deep, log-choked holes of slow-moving water. Some tremendous brown trout are caught in this section of the stream every year, but in general, northern pike predominate throughout the area and anything smaller than a trophy-sized fish finds survival to be a problem.

So it is that the mid-section of the Brokenstraw, (from the treatment plant at Youngsville to the mouth of Spring Creek,) is most inviting to the dedicated trout fisherman. A stream of tremendous potential with esthetic values to please the most demanding. A stream which if once fished . . . will never be forgotten. A stream that should be fished at least once in the lifetime of every trout fisherman.



Meet the new

MEMBERS

of the

Pennsylvania Fish Commission



Sam Guaglianone

Sam Guaglianone, Johnsonburg, owner of the Smith Keats Insurance Agency, is married to the former Jeanne F. McClintock. Both Mr. and Mrs. Guaglianone were born in Johnsonburg and the couple have two children.

Mr. Guaglianone was graduated from the Johnsonburg Area Schools and attended the United States Army Finance School, Fort Benjamin Harrison, Indiana and the Bryant and Stratton Business Institute, Buffalo, New York.

Active in a number of sportsmen's organizations, he is a past Vice Chairman of the Elk County Federation of Sportsmen's Clubs. Similarly active in community affairs, he has served as a member of the Borough Council, is presently a Director of the Johnsonburg Welfare Chest, Johnsonburg Area Development association, Elk County Soil and Water Conservation District and the Elk-Cameron Auto Club. He is a Scout Master and Committee Member of the B.S.A.

Mr. Guaglianone is a charter member of the Johnsonburg VFW and American Legion. He served in the United States Army and when discharged in 1945 was accredited with 4 battle stars.

William O. Hill, Erie, is in his 9th year as an Erie County Commissioner and is presently serving as Chairman of the Board of County Commissioners. Married to the former Lorraine Edith Alm, of Minot, North Dakota, the Hills are the proud parents of a daughter and five sons—four of whom served in the Vietnam conflict.

Mr. Hill was graduated from Erie's East High School, The Alexander Hamilton Institute (Business Administration) Engineer's School, Fort Belvoir, Virginia, and the Special Forces School.

During WWII, he served in the European, African, and Asiatic theatres of operation. A member of "Merrill's Marauders" he spent 23 months behind Japanese lines. He was awarded the Bronze Star, the Purple Heart with cluster, the Department of the Army Commendation Medal with pendant and ten other military awards. He has served as a member and instructor of the Counter Intelligence Corps School and was a Security and Investigation Officer in Europe on NATO defense.

Mr. Hill is actively involved in civic and sportsmen's organizations and serves as Legislative Chairman, Director, and Chairman of the Planning Commission of the Erie County Sportsmen's League.



William O. Hill



James J. Stumpf

James J. Stumpf, Laughlintown, is the owner of The Hobby Shop in Latrobe, Pennsylvania and his is a familiar name in Westmoreland County sporting circles. He has served as Past President of the Westmoreland County Sportsmen's League, The Latrobe Sportsmen's Association, The Salem Beagle Cub and is a member of the Penn Rod & Gun Club, the Greensburg, Sportsmen's Association, and the Laughlintown Protective Association.

Fishing and boating have long been Mr. Stumpf's favorite recreational pursuits. He is a Charter Member of the Mountain Boat Club of Ligonier and from 1954 to 1956 operated a Marina on the Youghiogheny Flood Control Reservoir. From 1954 to 1965, Mr. Stumpf held a Captain's License to carry passengers for hire.

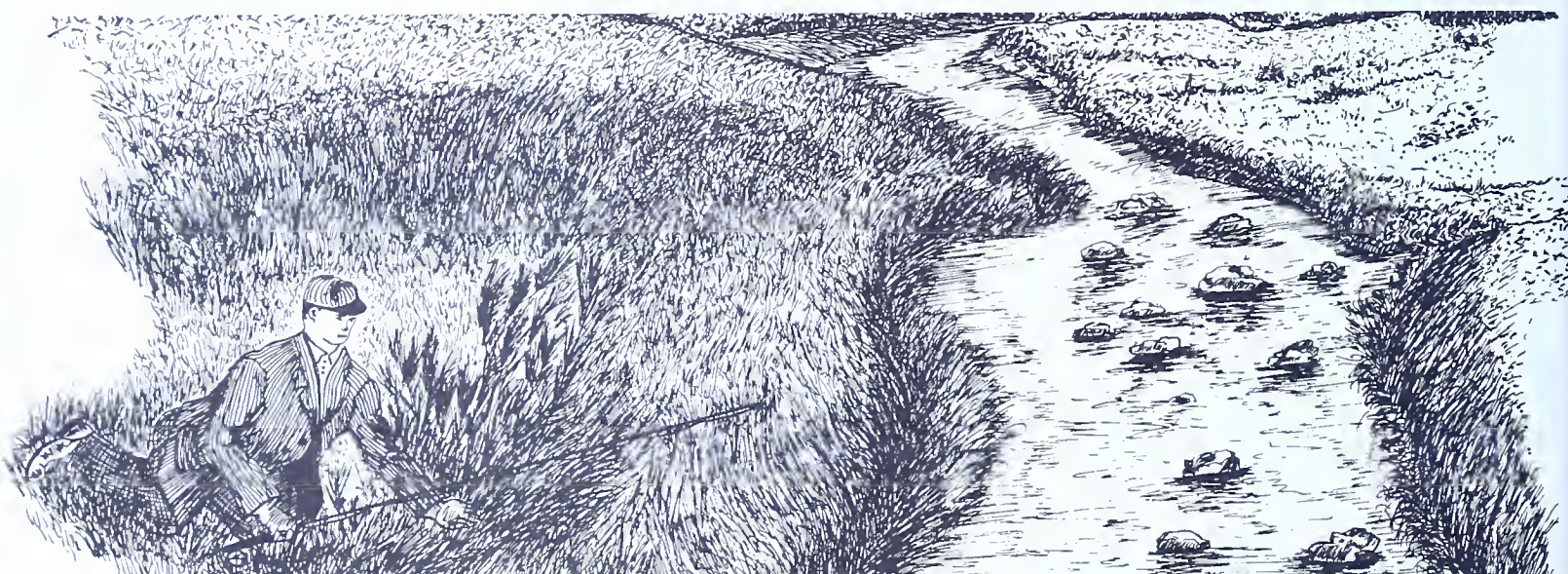
A holder of a Pennsylvania Real Estate Salesman's license, Mr. Stumpf and his wife Lillian have a daughter, Lydia.

*Another time—another place perhaps,
but each of us will remember . . .*

STONE RUN

illustrations by Galen Mutch

by William W. Betts, Jr.



I suppose everybody who has lived as long as I have has come from time to time to drink at the spring of the Past. Sometimes he drinks of wormwood, sometimes he drinks of wine. For me it is always wine—in reverie I'm quite discreet—and the most intoxicating times of all are the lamb-white days of Chinklacamoose. Today this little town which reposes deep in the heart of the Alleghenies is known as Clearfield, but for me it will always be Chinklacamoose.

The village slept as the boy slipped quietly from the old brick house and on a bicycle built for one began the long ascent into the mountains. The region through which he pedalled was known then as Mt. Joy—perhaps it is still; it will always be that for him. And the stars floated serenely overhead, and the moonlight showed him the way. And it was April.

He didn't know in miles what it

was, but he knew in Time. Time let him be young and easy, but Time required to be acknowledged, and it meant leaving the river town at the deepest hour of the night in order to be on the spot for the first feeding splash of the morning.

The paved road by and by improved into dirt and then began a leisurely wandering across the hills. Against the lighter sky the dark black of a silo or some other farm building occasionally appeared but everything on earth was fervorless, was still. Eventually the dirt road lay exhausted and a bridle path began. Here the boy walked the bicycle, just a little way into the dark woods, until deep in a clump of hemlocks, in a little recessed area he could secret the machine.

It was much darker in the woods, and with care the boy made his way along the steep trail. It was close much of the time, with mountain

laurel and grapevine rudely caressing the traveler. But the path was steadily downhill, and as his vision began to distinguish between shade and shadow the boy actually began to run along. Whippoorwills were still calling and from time to time the spirit of one would flit up from the path ahead. Once, just as the first blushes of dawn were pushing back the black, he made out a grouse with her brood, the hen feigning a broken wing and frantically tumbling down the path while the chicks scattered to vanish under chips and leaves. The boy trod with the greatest care here and patiently flattered the mother hen in her device, and downhill still he went.

From very deep in the forest sounded now the last eerie WHO-O-O-O-O-o-o-o-O-O-O of the great horned owl, and the boy shuddered lest he hear again what he had heard before, the chilling scream of a rabbit arrested in moonlight by the savage claws.

But the forest was awake, and if it hadn't been, the blueclad doorman with his THIEF, THIEF! would have soon seen to it. The ovenbird, and the chickadee, the towhee, and the white-throated sparrow provided a gauntlet of song, and the eager pine squirrel chattered in the background.

The boy was Natty Bumpo now, and Hiawatha, and Simon Kenton, and the Little Shepherd. Nothing he cared, and he ran his heedless ways farther and farther down always down. He could smell the water now, and he could hear it, and impulsively he seized a chunk of wet moss and pressed it to his face both sides.

The tinkling sound had now become a roar and of a sudden there it was. They called it Lick Run, and it was a lovely mountain stream, cold and fast and clean. But His stream was here too, for the path had brought him (hadn't it always?) to the junction of Lick Run and Stone Run. Stone Run was much smaller but just as fast and just as clean and just as cold, and it was his stream. The boy lay flat here on the wet rocks where the waters came together and placed his lips reverently upon the surface. It was a ritual, and a deep, long drink was the last part of it.

Joy was ahead of him, and the whole day. First this lunch—an adoring mother insisted on lunch. How could she know that Time did not allow for lunch, and that the little package always stayed the day right here. The boy shinnied up a familiar aspen and high above the ground he wedged into a fork of the tree the careful sandwiches. Sometimes of course a coon, or squirrel, or other gifted tree-topper would take advantage of this disorder, but the boy could not care less. If it was there when he returned he would enjoy it as he left the forest. If it was not . . .

Three doe looked him over curiously as he slipped from the tree, but they were not startled, and he saluted them with an invitation to drink from his waters.

It wasn't much of a rod, just a little bit of bamboo, and the reel was a spool with a crank, but such as it was he assembled the outfit and ran the line out through the last eye and attached a tiny hook (it was a #10), from which the barb had carefully been snipped. And now the crickets. Somehow a jar of crickets had survived this ghostly ride into the mountains, and the creatures were jet black busy in the glass house. One would do to start. The boy was ready.

The first pool was a deep one. The water came into it with a rush and boiled into a froth at a large log and made quiet places after that. It was Time now. The whole world was alive. Through the mist on the water the boy could make out faint ripples and now and then a real splash. The cricket, with just the suggestion of a sinker to pull it under, was cast upon the water.

Is it the most beautiful thing in the world? This vivid black and white and orange, stippled in red. Clean and cold and slippery wet. It wasn't an immense fish, not a whole lot bigger than the cricket which had done its work upon him, but it was sunshine and flowers, carols and butterflies, peppermint and maple sugar. It was Joy. The little run received it back, and Time considered.

The boy fished pool after pool as he made his way up the stream. He knew every riffle of the run, and even for the slightest slow spot behind a rock in mid-stream he had the wary brook trout located. He knew too that Time mattered, and that the first two hours of the day would be the most exciting. Still he did not hurry. The crickets he handled gingerly, and the

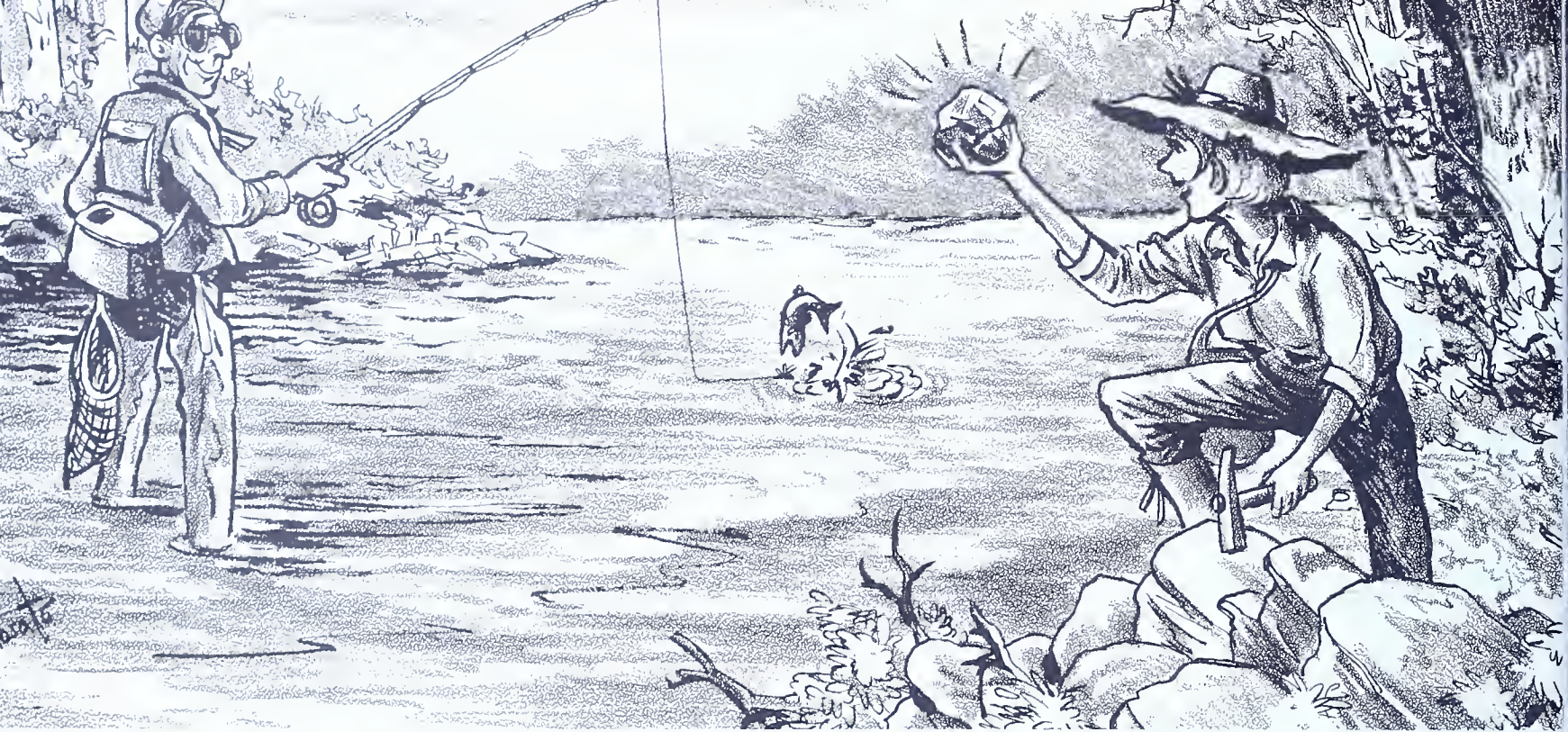
supple trout he held only in the water and carefully released.

Time was at its noonward height when he reached that part of the stream that lay in the open. The beaver had meticulously stripped the area of every aspen and an expansive field of wavy grass and ferns had grown up. There was no real cover, and the boy had to slide along on his stomach to the edge of his favorite pool in order not to be detected by the wary trout. This was his habit, and he'd done it every trip, not only at this most difficult of pools but at others upstream.

Elbows and knees then. And wriggle wriggle. Slowly the boy made his way through the delicate forest grass, closer and closer to the bank from which he would cast. As he parted the last clump of ferns . . . he found himself staring face to face with that most awful of the mountain people, the timber rattlesnake. The beady eyes, and the flat head, and the yellow scales, and the whirring buzzed. The boy was stone. He was Zero at the bone. Was it Time? Dots of rose, a dazzling blue-and-white, grouse chicks, and bubbling water—all shim-

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NEW FUN NEW OUTLOOK

by John C. Rex

How to add another dimension to your fishing trip . . . and salve a guilty conscience as well!

From the time the Hendricksons and the Quill Gordons emerge in the Spring until the last Sulphur spinners disappear in the Fall, I chase the hatches. During the warm, humid evenings of Dog-Days, I love to wade wet in receding river waters and cast small surface plugs into rocky pockets for small-mouth bass. With the first frost in the Fall, "Musky Fever" overpowers me and I search out the spots where I have an opportunity to do battle with old *Esox masquinongy*. When the Atlantic salmon run each year in a certain beautiful river in New Brunswick, I am blessed with opportunities to cast flies with colorful and romantic names for that wonderful fish. Ice break-up and rising water during the early Spring seasons provide chances to take walleyes with buck-tail jigs from the deep eddies along river shorelines.

The patron saint of sports fishermen, Isaak Walton, said,

"O, the gallant fisher's life,
It is the best of any;
'Tis full of pleasure, void of strife,
And 'tis beloved by many."

So be it, but what Isaak failed to do was to forewarn those who might try this sport as an avocation that there is danger of addiction and that one of the consequences of addiction is the devotion of hundreds of hours of time to the pursuit.

I have a good marriage. My wife is a fine, forbearing person—so much so, in fact, that her tolerance of my obsession with this business of angling and the time I spend away from home makes me feel a little guilty. Years ago, in anticipation of a problem in this area, I bought some decent gear for her and devoted some time on instructions, with the hope that she would develop into a "fishing wife" (they tell me that a "fishing wife" is a joy forever).

It did not work. Her handling of tackle was pathetic and her interest was nil. So, the years went by—she a happy housewife, I a fisherman with a guilty conscience.

Then, something happened which has further mellowed our relationship and which has contributed to my relaxation when I have a fishing rod in my hand.

Last year, Charlie Fox and I fished for muskellunge in the vicinity of Bancroft, Ontario. Bancroft, the county seat of Haliburton County, is a picturesque little community of about 3,500 population. Our visits there were pleasant and very interesting in consideration of the information they produced.

Bancroft is unique in that it occupies a spot on this good earth where there are rock outcroppings, containing a great variety of minerals, many of them semi-precious. We learned that this is one of the capital areas of the world for mineral collectors, who proudly refer to themselves as “rock hounds.” The townspeople are enjoying their good fortune. You see them in groups and individually, coming and going, with their knapsacks on their shoulders and their rock hammers in their hands. An active, amateur mineral society maintains a creditable club house and mineral display. The rock shops in the town offer interesting specimens and a selection of inexpensive jewelry, set with local stones, some of them of incredible beauty. Each August, the Chamber of Commerce and the mineral society sponsor a “gemboree,” which attracts 10,000 visitors during a one-week period, many of them from lands across the sea.

While there, we talked with Bert the Barber, a “rock hound” for more than 20 years. He graciously took the time to tell us about the history of the area and the processing of rocks for jewelry making. He showed us equipment and the hand-made jewelry he sells in his shop as a side-line. We left Bert with a handshake, with some of his things for the folks back home and with an aroused interest in the prospects of



a hobby, new to us, which would be compatible with fishing.

During the remainder of the trip (we took several good muskies, by the way), we paused to examine rocks along the shores of the lakes we fished and along the roads we travelled. It was like they say—“It is amazing what you can find when you look at things closely.”

Upon returning home, my wife responded to my story and my little gifts for her with great interest. Subsequently, we visited a rock shop, where the friendly and helpful proprietor gave us instructions and sold us the equipment to get started.

From here, the short of the story is that we have learned a lot, we are sharing a fascinating hobby, my wife is turning out some beautiful jewelry for herself and friends, and, happy to say, I am wading streams and casting away with a bit more peace of mind than ever before.

I say to her, “Let’s go fishin’.” She says to me, “Sure!” While I am putting the fishing gear in the car, she appears on the scene with her leather boots, knapsack and rock hammer. I fish. She hunts rocks. We are both happy.

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Perhaps the author, John C. Rex, is known by relatively few of the millions of Pennsylvanians and out of state tourists who visit the Commonwealth’s “State Forests” and “State Parks.” But his 30 years of service to his department has been devoted mostly to land surveys, land titles and land acquisition programs involving these most beautiful “portions” of **PENNS WOODS**. John is a registered surveyor, holds a degree in Forestry and is now serving as Chief of the Department of Environmental Resources’ Division of Land Acquisition.

Says John, “My trout fishing started when I was so small my dad waded with me to keep me from falling and guided my rod handling by placing his hand over mine on the grip.

“It has been my fortune, boy and man, to have come under the influence of some great fishermen. Their instructions on technique have been important, of course, but I think I am more indebted to them for their guidance in matters of outdoor courtesy and appreciation for the many amenities associated with this great sport of angling which are not directly connected with the catching of fish.”



Four stickworms and their cases. Notice the lower case where the larva is coming out.

TRY A STICKWORM

by Sam Hossler

Ever have one of those days on the trout stream when nothing you do produces a strike? This particular Sunday was rapidly turning into just such a day. The sun was shining and the birds were singing but the trout were sulking in their pools and ignoring all our offerings. It was the second day of the season and had all the makings to be even better than the first. Yesterday everything we did was right. Nymphs, streamers, spinners—you name it and it took fish. We had really cleaned up! Now it was another story. Night crawlers or red worms made little impression on these fickle fellows.

This morning I had seen but one fisherman with trout. He only half smiled when he begrudgingly gave the information that today the thing to use was live minnows. Great! That was the *one* bait we didn't have and it was at least twenty-five miles to the nearest bait shop! Naturally, we didn't have a minnow trap with us either. If they hit minnows, why not streamers? The only trouble with my reasoning was that so far the trout didn't think the way I did. The water was so clear you could count the stones

on the bottom but it wasn't stones I was watching—trout swam lazily by in the small pool below us. I counted six of them as they cruised past, ignoring the weighted woolly worm I was bouncing along the bottom. My partner snipped off his streamer and tied on a nymph with which he had good success the day before. A careful cast and it drifted through the pool just right—nothing! Changing to a number ten hook I slipped on a juicy red worm, and sent him tumbling along the rocks lining the stream floor. All that happened was the worm got a bath. Again and again we tried, but the trout would have none of it. This was too much for me so I climbed up the bank and sat under a large hemlock. Chewing on a sandwich I leaned back and enjoyed the weather and scenery while pondering the situation.

We had bought the camp early in the fall the year before, not only because of the hunting possibilities but there were excellent trout streams all around. When we were negotiating the sale I can still remember the clinching words, "Why, we can take our limit of trout anytime . . . within five minutes of camp."

The previous owner had gone on to tell us where the best streams were; how to get to some of the more remote spots that held the best holes; how he fished them and what bait he used. As I said yesterday was just as he had described—the fish practically jumped into your net. But this day was something else again. We had arrived at camp Friday night in a drizzling rain. Bringing everything from salmon eggs to dried grasshoppers, but no minnows. Worms we had by the dozen, both the red variety and night crawlers, but no minnows.

The temperature hung around the 50° mark so even though it was wet, it wouldn't be the numbing damp cold that creeps into the joints of your fingers making it almost impossible to tie a fly to your tippet. When the aroma of coffee, eggs and bacon pried open our eyelids the next morning, low and behold the sky had cleared. There were all the promises of a real blue bird day in store for us. I can remember opening days when it spit snow and one year there was twelve inches of the white stuff on the ground. After breakfast we piled into the cars and headed for the nearest stream. The first car load cut through the mountains and headed down stream to park. They planned to work up to a big hole midway between our upstream starting point and theirs. This was also where we would have lunch. There's no point boring you with how trout were taken by both parties—it came to the point that we kept nothing under ten inches. Today, only one day later, the sky was just as blue and the temperature even a little warmer. It should have been an even better trout day, but we just couldn't put it all together.

Something kept clawing at the back of my memory; I couldn't put my finger on it but I knew it was something I was supposed to remember. A special bait—but what? The harder I tried, the foggier it got, so I just stayed propped against a tree and watched the worms being dunked—then changed for flips, then changed back again. Getting up slowly, I crept over to the edge of the creek to watch the water and catch a glimpse of the trout as their sides would flash in the sun. Then it hit me. There I was looking at the most deadly bait in the world and we had been stomping right past it all morning. The rocks in the stream were spotted with stickworms. Dozens of caddis fly larvae cases hanging to their underwater sanctuaries. What could be a more natural food? Locally, called "stickworms," they are a favorite trout bait in the area. Their little cases made of tiny sticks and grains of sand cemented together by a substance secreted by the larva were everywhere. This was what I had been trying to remember! We had been told that these streams had unusually large caddis fly hatches and at the right time a fly fisherman could have a picnic. This also applied to the early season angler—he can pick his bait right out of the water as he needs it. Walking downstream a few hundred yards I waded out and began collecting stickworms from their rocky homes. It didn't take long before I had a couple dozen in my bait box. These larvae can



Here's a happy stickworm fisherman. Bill Baker shows how it's done.

be found in most northern streams and their cases will be seen clinging underwater to the rocks and logs. Either made of small sticks, grains of sand or a combination of both you will recognize them at once.

Changing to a number twelve hook I impaled one of the larva behind the head leaving him still in his case and placed a small split shot about ten inches above the hook. Many fishermen prefer to remove the larva from their cases and this does make a much neater bait, but I used him case and all. I happened to be standing at the tail end of a small pool so I casually flipped the new bait upstream. The split shot kept the stickworm down but not all the way to the bottom and the crevices that grab and hang up the line. The line went taunt . . . not the characteristic tap, tap, of a finicky feeding fish but a real strike. The leader sliced through the water heading for an old tree trunk laying half submerged along the other bank. Putting as much pressure as I dared on the light tippet, it was a toss up whether or not I could turn him before he would reach the sunken branches and tangle up the leader. Even though it was a fairly light fly rod, a twelve inch trout was no match for it. He soon tired and was flopping on the grass beside me. A beautiful brown . . . my first for the day! Moving upstream to the next pool a repeat performance was made. Not on the first cast, however,

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Fisheries biologist John Selcher surveys the pit where about one half of the Benner Spring kill await burial. Final cleanup and disposal was completed after photo was taken.



Superintendent McCreary pointed to one of the truckloads and asked, "Wouldn't these have been nice in some mountain stream?"



On March 1, 1972, tragedy struck Spring Creek, Centre County again! The second time in less than a year, but this time, an extensive gasoline spill killed fish not only in the stream, but also entered the Benner Spring Fish Research Station Hatchery stream raceway and killed more than 25,000 adult brown trout which would have been stocked within a few weeks.

The incident began early on the morning of March 1st, when a gasoline tank truck made a delivery to a service station about five miles above the hatchery. No attendant was on duty at the station and the driver proceeded to fill what he thought was an empty storage tank. Thinking it would take some time for the tank to fill up, he retired to his truck. At 6:30 A.M., the service station supervisor reported to work and found the truck driver hosing down the drive area, explaining that he had lost about 200 to 300 gallons of gasoline. When the driver left, the supervisor made an immediate audit and found the total to be more like 1900 gallons. That evening the owner called Waterways Patrol-

(below, left) worker nets dead trout from head of raceway. Anything with a "wiggle left" was transferred to clean water. (below, center) No guesswork here—all fish were weighed for an accurate count before disposal. (below, right) It was tiring work but there were few complaints—just a sick feeling shared by all.

GASOLINE TAKES BENNER

by Cecil Houser,
Pathology Department

man Antolosky and gave a revised figure of 2770 gallons of gasoline lost.

The Fish Commission received no notification of the spill until nearly six hours later when two unknown sucker fishermen dropped in to the Benner Spring Station and informed Superintendent Ray McCreary that some dead suckers and minnows were seen at the hatchery's stream diversion dam. The hatchery uses both spring and stream water at times and can close off the stream at the dam. Had the Station been alerted to the spill all of those fish could have been saved.

Waterways Patrolman Paul Antolosky was alerted and began an investigation. Ken Corl, Assistant Chief, Trout Production returned immediately from the Huntsdale hatchery to evaluate the loss at the Station. The Department of Environmental Resources was contacted and they too assisted in the investigation. Fishery biologists at Benner Spring began collecting data and water samples.

Fish Culturists, under the supervision of Superintendent Ray McCreary

SPILL OLL PRING



Photos: Jim Yoder

and Foreman William Kennedy began the salvage operations that kept everyone busy for the next 24 hours! The men worked in groups and shut off all areas where stream water could enter and diverted spring water into the polluted raceway. This created additional problems since it took water from other raceways filled with fish and reduced the flow and oxygen. Emergency pumps were placed at intervals along the raceway to pump fresh spring water into the polluted area in the hope of reviving the affected fish. Men with nets were stationed at each of the bulkheads along the raceway in an attempt to keep the fish from crowding the screens. This was a hopeless effort, as the fish kept coming by the thousands! A tanker was employed to transport fish to nearby concrete ponds containing spring water in an effort to save more.

March 2nd, these same men were collecting, counting, and weighing, by the truck loads, dead trout from the raceway. No guess-work was permitted—all fish were weighed before disposal and burial. The actual total of stockable size brown trout lost at the hatchery was 25,292 (6364 pounds).

The number and species lost in experimental warmweather units could not be determined because of the ice cover on these units. The total stream area affected was a little over 7 miles—loss, well over 3,000 fish. But, due to the high turbid water, many more fish were undoubtedly lost that could not be counted.

Fortunately, because two unknown fishermen showed enough concern to

alert the hatchery where everyone, supervisors, biologists, fish culturists and the waterways patrolman worked doggedly through the remainder of the night—and into the following day—47,000 brown trout in the same raceway were saved!

Pollution is expensive, not only in terms of "value of fish lost," but in the man-hours expended in investigation, water chemistry, phone calls, written reports, and finally, salvage and disposal. Over 140 hours logged in connection with the Benner Spring fish kill—and one single toll free telephone call would have saved the day!

Fortunately, for PENNSYLVANIA ANGLERS, the loss at Benner Spring, while tragic, will not affect the Commission's pre-season trout stocking program this spring. For the third straight year our hatchery system has been able to exceed the basic stocking numbers of trout required for release by approximately 10%. Executive Director Ralph W. Abele pointed out, "Trout production throughout our hatchery system can easily make up the loss of trout at Benner Spring.

Director Abele expressed deep concern, however, about the cause of this pollution. "The loss of trout in the hatchery was completely unnecessary. It could have been prevented or greatly reduced if the driver of the truck would have reported his carelessness immediately. There is no excuse for such negligence or the unsuccessful attempt to hide a mistake involving a highly toxic and dangerous substance. We intend to prosecute those responsible for this fish-kill to the fullest possible extent under the law!"

The runoff from melting snow simulates the path taken by the gasoline the day before this photo was taken. Service station driveway is to the left of the photo, arrow indicates the bridge over Spring Creek, not far away.

Following normal runoff drainage paths, the gasoline entered Spring Creek through this culvert approximately four miles upstream from the Benner Spring Fish Research Station & Hatchery.



FLY TYING

by Chauncy K. Lively

"The Little Olives"



Baetis levitans, one of the Little Olives.

In the literature of fly fishing there is perhaps no single grouping of mayflies mentioned more than the Olives. The insects so designated embrace several genera and many species, both large and small, and the name is descriptive of the body coloration of the flies. In the British Isles they include, to name a few, the Pond Olive, Large Dark Olive, Small Dark Olive, Medium Olive and Olive Upright. And the Blue-Winged Olive is so well known there that it is often referred to by its initials, the B.W.O. Of course, the entomology of British streams is somewhat different from that of our own, but there are nevertheless some rather close similarities, particularly among the Little Olives of the genus *Baetis*.

Because of their small size *Baetis* mayflies are often unnoticed and unheralded by fishermen, an unfortunate circumstance because their wide distribution and great appeal to trout make them worthy of close study by any serious angler. Dr. Needham's *THE BIOLOGY OF MAYFLIES* describes sixteen species of *Baetis* in the Eastern United States and at least three species, *Baetis levitans*, *B. cingulatus* and *B. vagans*, are common to many of Pennsylvania's trout streams. Eastern species have two tails and the body color

ranges from pale greenish olive to dark brownish olive. Characteristically, the wings are of varying shades of smoky gray, sometimes appearing almost black as the fly is seen on the water, and the hind wings are small and often strap-like in shape. By the measure of size known best to fly fishermen they range from #20 to #22, with a few (like *B. vagans*) slightly larger.

Baetis is known as "the many-brooded mayfly" because the span of its life cycle is shorter than the usual twelve month period common to most mayflies. Thus, a single species may appear on several separate occasions during the year and if more than one species is present in a given stream there may be sporadic hatches of *Baetis* throughout the season.

The Little Olives are often found emerging amid the hatches of larger mayflies and this always provides interesting fishing. Last season, in late May and early June, we fished to a fine hatch of *Baetis levitans* which occurred simultaneously with the emergence of the big sulphur, *Ephemerella dorothea*. Individual trout showed a distinct taste for one or the other insect and this element of selectivity made the fishing all the more fascinating.

Pseudocloeon is another genus of mayflies which properly should carry the Little Olive designation but which seems to have been ignored by eastern angling writers. Superficially, these tiny mayflies resemble *Baetis* and are possibly mistaken for them. However, close inspection of *Pseudocloeon* under a strong glass will reveal the absence of hind wings since it is one of the few two-winged mayflies. On Dunbar Creek in Fayette County I have observed *Pseudocloeon carolina* as early as May 24 and as late as October 31. Between these dates I have seen it on each of frequent visits to this stream and I suspect the span of emergence is continuous over much of the season. In flight it is easily mistaken for a midge and the hook required for the artificial is size #24.

The Little Olive dun shown in the illustrations has been a good performer when the naturals are emerging and when tied in a range of sizes from #18 through #24, with a variation in body color from light to dark olive, the single pattern covers most of the Little Olives found in Pennsylvania. The dressing is fairly simple, with the hackle wound parachute-style around the base of the wings. This method of hackling balances the fly properly without tail support and is extremely durable. The wings are of hackle tips, preferably from the small, broad hackles found near the head (the narrow part) of a dun gray hen cape. To provide a more rigid base for hackling than the wings alone, the root of the hackle itself is left uncut and bent upward in front of the wings. Then wings and hackle root are held together as the first turn is made, after which the wings will hold their position for the remainder of the hackling operation. After hackling the hackle root is in an upright position between the wings and it may then be trimmed off.

TYING A LITTLE OLIVE DUN:

◀ 1. Using a size #20 hook, bind fine tying thread about $\frac{1}{3}$ shank distance behind eye. Thread shown is Danville's olive pre-waxed nylon. For wings select two medium dun gray hackles and strip unused barbules from base. Wing height should be equal to length of shank. Bind wings to hook wet fly style, as shown, with glossy surface inside.

2. Pull wings upright and take several ▶ turns of thread behind base to lock positions. Be sure wings are set straight, then trim off butts as shown.

◀ 3. For ribbing tie in a short length of fine brown thread near base of wings. Holding ribbing alongside shank, spiral thread over ribbing and shank and half-hitch at bend, allowing ribbing thread to extend rearward. Tie in two dun gray hackle barbules for tails and take a turn of thread behind base of tails to angle them upward.

4. Wax about one inch of the tying ▶ thread next to the hook and apply a sparse dubbing of olive-dyed kapok or olive spun fur. Wind body dubbing forward and half-hitch in front of wings.

◀ 5. Wind ribbing thread clockwise over dubbing in spaced turns. Tie off in front of wings and trim excess.

6. Select a good medium dun hackle ▶ with barbule length about twice the gap of hook. Position hackle flat, with glossy side down and the root between the wings at their base. Bind with two turns in back and two turns in front of wings; then bend root upwards.

◀ 7. Wind hackle clockwise around base of wings and hackle root. Tie off behind eye and trim excess. Trim off hackle root between wings.

8. A whip-finish at hand and a drop of ▶ lacquer on windings completes Little Olive Dun.



How to Avoid an Opening Day Fiasco

continued from page 7

Wash the storage compartment of *canvas* creels after each use and dry out before storing.

Probably one of the most common problems experienced with fishing rods is loose or lost line guides.

This can be avoided by inspecting the line guide wrappings. If they are frayed or rotted, rewind with rod winding nylon or in a pinch, sewing thread can be used. After rewinding, coat with an application of flyhead cement or Sportsman cement.

Also protect line guide wrappings on new rods with an application of cement. If you're out of cement,

a spare line guide or tip, a paper clip can be formed into an effective temporary replacement and secured with plastic tape.

Rods are also delicate and expensive pieces of tackle and it is advisable to transport them in a case, preferably the rigid tubular type. These tubes are also best for storing rods when not in use. Never store an assembled rod in a horizontal position on pegs or lean in a corner because some rods will take on a "set" and bow.

Assembled rods are best stored vertically by suspending in a wall rod-holder designed for that purpose. An inexpensive substitute can be fashioned by attaching a length of furring strip to a wall about seven feet above the floor and then screwing cup hooks into the strip about two inches apart. Rods are then stored by placing the tip over the hook.



A hook hone to sharpen dull lure hook points and fine steel wool or aluminum foil to shine the metal blades of spinners are also handy items to have and will mean more fish.

clear lacquer or fingernail polish will serve as a good substitute.

Inspect rod tips and ferrules to make sure they are secure. If loose, carefully heat with a match and remove. Scrape the dried adhesive from the inside of the tip or ferrule and sand the dried cement off the rod.

Fasten back in place with ferrule cement that usually comes in a stick and is melted with a match or with Sportsman cement.

It's also a good idea to carry a spare tip and line guide in your tackle box along with paper clips, narrow plastic tape or plastic electricians tape. You'll find these items indispensable for a number of field repair jobs.

For instance, if you should be caught short without



Indispensable aids for the angler include spare line guide and bail spring, colored grease pencils, paper clips, Sportsman cement and plastic tape.

The most frequent problem experienced with reels is an unsmooth action caused by sand and grit in the moving parts and can easily lead to other and more expensive problems.

Sand and grit is easily removed, first by washing the reel out under a faucet and then finishing the job with gasoline or kerosene. Although more time is required with kerosene, it is preferred because it is less hazardous than gasoline. Some household detergents used with warm water also do a good job if the reel isn't gummed up too badly.

After cleaning, wipe down with a rag and apply a *small amount* of reel lube or gun oil to the moving parts. An excess of lube or oil will only collect more sand and grit a lot easier. And remember—never lay

continued on next page

How to Avoid an Opening Day Fiasco

continued from preceding page

a fishing reel down in the sand or dirt.

Other worthwhile preventative maintenance on reels includes tightening all loose screws and checking line guides for burrs. A bit of Sportsman cement placed on the head of each screw will help to keep them secure.

Common spinning reel failures in the field include broken bail springs, broken or lost line guides and lost line guide screws.

It will also pay to carry these three items as spares. Incidentally, some reel manufacturers provide reel repair kits for under five dollars and can prove to be a worthwhile investment.

Reels also take a beating when in use so avoid further abuse when transporting them. Take care to carry them in a leather case or in an old heavy sock. Cloth, such as flannel, wrapped around the reel also affords good protection from both physical damage and dirt.

Reverse the fishing line on reels each year or discard and replace if badly worn. In addition, pay close attention to the quantity of line on the reel. An over filled spool is just as bad as one that is under filled.

Under-filling bait casting and spinning reels will

limit the casting distance and over-filling will encourage a "bird's nest," many times an "eagle's nest."

The under-filling of spinning reels will also often result in snapping off the lure or bait during the cast.

Over-filling of a fly reel can cause the line to bunch up and bind between the spool and housing.

Always follow the manufacturers recommendation on filling spools, for an incorrectly spooled line reduces efficiency and smoothness of performance.

Holes in landing nets can cause you to lose that lunker that you finally tied into, so check that net carefully and repair or replace if necessary. Make sure the elastic band on the handle is in good shape also. More than one fisherman has lost his net because the elastic band parted ways with the handle.

Dull hook points on lures are easily sharpened with a hook hone and the natural metal portions can be shined with fine steel wool or aluminum foil. Clear fingernail polish or lacquer applied to the metal after shining will preserve the finish.

Don't forget to check your fishing vest and tackle box for all the necessary paraphernalia that is peculiar to the fisherman's inventory.

So, when opening day rolls around, be prepared. You'll not only avoid the embarrassment caused by the snickers of your fellow fishermen when everything starts to go wrong—but you'll catch more fish. For it's a well known fact that to catch trout, you've got to have your line in the water!

What ? Warts on Fish ?

by Cecil Houser, Pathology Dept.

Benner Spring Fish Research Station

All of us have heard at one time or another the old adage that picking up or handling toads gives you warts. Modern medicine, however, has shown that they are really caused by a virus infection.

Fish, like humans, are also prone to virus infections and one in particular which resembles, in a way, warts on people. These wart-like structures usually occur on wall-eye, bass, and sunfish. They may be found on the body surface of the walleye, but on sunfish they are more limited to the fins.

Every year we receive letters from fishermen describing these wart-like structures on fish they have caught. Many times actual specimens are brought in for inspection.

The infection is caused by a virus known as *Lympho-*



cystis. It is chronic in nature, and very seldom causes death to the fish. Cells which are the host for the virus become infected and are stimulated to abnormal growth and these cells undergo a 50,000 to 100,000 time increase in size. Thus, the structures which look like warts, are really oversized cells. These cells will burst in time and spread the virus particles to other fish. Much like a virus common to man, it is transmitted from fish to fish.

A common question among fishermen, "Is it harmful to me?" The answer is NO! It cannot be transmitted to man and if the fish are cleaned and cooked thoroughly, they can actually be eaten. So don't be alarmed if the next fish you catch has warts . . . it's an ordinary occurrence in some of Pennsylvania's waterways.

FINANCIAL REPORT

of the

PENNSYLVANIA FISH COMMISSION

FOR THE FISCAL YEAR

July 1, 1970 to June 30, 1971

by Edward T. Durkin, Comptroller

The Fish Fund again enjoyed a very successful year. Revenue received was \$500,000 higher this year than the previous year. Expenditures were only 2% higher than the previous year resulting in a half million dollar increase in the Fish Fund available balance.

The Boating Fund showed a 54% increase in revenue received this year over last. This was due mainly to the receipt of the Boating Fund's share of the liquid fuel tax collected and paid by the Dept. of Revenue. The expenditures for the year were 26% higher this year over last year. However, the Boating Fund showed an overall increase of approximately one hundred thousand dollars this year over last year.

EARMARKED FUNDS

Act No. 458 Session of 1963 provides \$0.50 from each resident and nonresident fishing license to be

used for improved fishing. The Fish Commission spent \$671,829 more than the required minimum for these activities during this fiscal period.

Project 70 Fund was established for the purpose of acquiring access areas. Out of a total allocation of \$5,000,000 only \$149,569 remained unexpended as of June 30, 1971.

Project 500 Fund is a statewide bond issue established for the development of public outdoor recreation areas including lands acquired with Project 70 Funds. The status of the fund at the close of this fiscal year showed all but \$34,401 was expended or committed out of a total allocation of \$7,675,000. Additional Allocations will be made available in future periods.

The results of the Fish Commission's operations for the 1970-71 Fiscal Year are illustrated in the following detailed financial reports and statements.

FISH FUND				BOAT FUND			
	<i>Fiscal Year Ended 6/30/70</i>	<i>Fiscal Year Ended 6/30/71</i>	<i>Percent of Increase (Decrease)</i>		<i>Fiscal Year Ended 6/30/70</i>	<i>Fiscal Year Ended 6/30/71</i>	<i>Percent of Increase (Decrease)</i>
Cash on hand, beginning of period ..	\$3,996,335	\$4,051,485	1	Cash on hand, beginning of period..	\$ 714,360	\$ 671,854	(6)
Receipts during period	4,504,894	5,012,894	11	Receipts during period	558,568	863,199	54
Total cash available	\$8,501,229	\$9,064,379	6	Total cash available	\$1,272,928	\$1,535,053	20
Expenditures during period	4,449,743	4,546,445*	2	Expenditures during period	601,074	762,115*	27
Cash on hand, end of period	<u>\$4,051,486</u>	<u>\$4,517,934</u>	11	Cash on hand, end of period	<u>\$ 671,854</u>	<u>\$ 772,938</u>	15
REVENUE:				REVENUE:			
Fishing Licenses	\$3,738,739	\$4,129,131	10	Motor Boat Registration Fees	\$ 510,558	\$ 553,200	8
Fines and Penalties	99,979	103,093	3	Motor Boat Fines	17,940	16,410	(8)
Federal aid for fish restoration	279,973	212,206	(24)	Other	30,070	293,589	—
Other	386,203	568,464	47	TOTAL	<u>\$ 558,568</u>	<u>\$ 863,199</u>	54
TOTAL	<u>\$4,504,894</u>	<u>\$5,012,894</u>	11	EXPENDITURES:			
EXPENDITURES:				Administration	\$ 123,884	\$ 146,528	18
Executive and General Administra- tion	\$ 417,287	\$ 515,897	24	Law Enforcement	363,170	456,729	26
Propagation and Distribution	1,748,937	1,889,900	8	Engineering	—0—	9,067	—
Law Enforcement	872,164	883,140	1	Other (a)	116,475	151,133	30
Engineering and Development	430,997	365,838	(15)	TOTAL	<u>\$ 603,529</u>	<u>\$ 763,457**</u>	26
Other (a)	1,038,723	912,685	(12)				
TOTAL	<u>\$4,508,108</u>	<u>\$4,567,460**</u>	1				

* Includes unpaid vouchers in State Treasury at June 30, 1970 in the amount of \$58,365. ** Vouchers unpaid as of June 30, 1971 in the amount of \$79,381.

* Includes unpaid vouchers in the State Treasury at June 30, 1970 in the amount of \$2,455. ** Vouchers unpaid as of June 30, 1971 in the amount of \$3,797.

(a) Appropriations to Other State Departments.

(a) Research, Conservation, Land and Waters, Appropriations to Other State Departments, Miscellaneous.

REVENUE

Cash in State Treasury to Credit of "Fish Fund" July 1, 1970	\$ 4,051,485.46
Less: Unpaid Vouchers in Fiscal Offices as of June 30, 1970	58,365.07
Net Cash Available for Expenditures as of July 1, 1970	\$ 3,993,120.39

Receipts July 1, 1970 to June 30, 1971

Resident Fishing Licenses—Regular	\$3,624,720.12
Resident Fishing Licenses—Senior	119,693.80
Non-Resident Fishing Licenses	313,453.80
Tourist Fishing Licenses	71,263.20
Special Eel Licenses and Miscellaneous Permits and Fees ..	4,467.00
Lake Erie Licenses	910.00
Commercial Hatchery Licenses	6,350.00
Fee Fishing Lake Licenses	8,425.00
Fish Law Fines	103,092.70
Interest on Securities	170,537.19
Interest on Deposits	15,213.69
Sale of Unserviceable Property (Department of P. & S.) ..	1,285.93
Contributions for Restocking Streams	19,309.93
Federal Aid for Fish Restoration and Recreation	212,206.05
Sale of Publications	86,666.92
Rent of Fish Commission Property	3,290.00
In-Lieu Payments for Fishways	75,000.00
Miscellaneous Revenue	39,896.61
Income from Sand and Gravel Dredging	137,111.66

Total Receipts from All Sources \$5,012,893.60

Total Funds Available During Year \$9,006,013.99

CLASSIFICATION OF EXPENDITURES BY ORGANIZATIONAL UNITS

Classification of Expenditures	Executive and General Administration	Propagation	Fishery Management and Research	Law Enforcement	Conservation Education	Land and Waters Management	Engineering and Development	Totals
Salaries	\$ 220,324.35	\$1,096,585.46	\$ 183,397.12	\$ 576,192.31	\$ 66,497.40	\$ 186,154.70	\$ 91,237.80	\$2,420,389.14
Wages	904.85	42,255.10	32,800.29	6,704.69	9,922.21	22,915.40	33,128.42	148,630.96
Employee Benefits	18,639.66	103,282.22	17,746.01	56,673.70	5,642.41	19,786.90	19,609.10	241,380.00
Professional and Special Services ..	87,602.86	1,738.07	14,199.11	2,051.26	11,973.02	1,435.10	435.45	119,434.87
Printing	45,564.41	1,164.14	423.23	3,171.36	121,708.88	—0—	103.55	172,135.57
Postage and Freight	35,402.34	2,927.96	965.77	3,470.17	238.53	598.68	720.91	44,324.36
Communications, Utilities and Fuel ..	10,713.47	76,517.75	9,657.05	26,465.08	2,270.65	1,349.15	4,850.69	131,823.84
Travel	10,646.33	15,208.47	13,276.94	93,612.61	5,154.57	6,685.43	4,687.56	149,271.91
Membership Dues and Subscriptions ..	677.90	17.00	269.90	—0—	65.50	52.40	267.00	1,349.70
Insurance Surety and Fidelity Bonds ..	1,813.46	4,089.00	1,000.00	3,280.95	225.00	1,545.00	450.00	12,403.41
Motorized Equipment Supplies and Repairs	1,562.31	27,705.52	5,584.75	19,063.86	1,022.83	9,860.55	4,561.48	69,361.30
Contracted Repairs & Maintenance Services	3,233.64	1,553.34	683.36	(2,899.19)	328.49	21,439.42	430.48	24,769.54
Rent of Real Estate	46,578.51	888.50	720.00	19,320.00	194.00	675.00	—0—	68,376.01
Rent of Equipment	10,961.92	1,345.80	6,143.62	—0—	9.00	510.00	1,306.72	20,277.06
Miscellaneous Materials and Supplies	13,839.76	95,054.30	33,549.14	16,694.73	7,471.53	(3,613.01)	(2,248.28)	160,748.17
Fish Food and Other Agricultural Supplies	—0—	253,927.88	220.00	—0—	—0—	273.26	—0—	254,421.14
Motor Vehicles	3,826.50	74,916.77	8,731.06	57,119.00	2,284.64	1,539.86	256.16	148,673.99
Livestock, Game and Poultry	—0—	2,649.07	379.40	—0—	—0—	—0—	—0—	3,028.47
Equipment, Machinery and Furniture ..	3,210.66	84,704.36	46,483.34	2,219.87	5,716.88	11,356.40	25,841.44	179,532.95
Grants	—0—	—0—	10,000.00	—0—	—0—	—0—	—0—	10,000.00
Buildings and Structures	—0—	3,368.74	459.41	—0—	—0—	—0—	101,527.08	105,355.23
Non-Structural Improvements	—0—	—0—	—0—	—0—	—0—	—0—	78,672.90	78,672.90
Refund of Receipts	394.50	—0—	—0—	—0—	—0—	—0—	—0—	394.50
Total Expenditures by Fish Commission	\$ 515,897.43	\$1,889,899.45	\$ 386,689.50	\$ 883,140.40	\$ 240,725.54	\$ 282,564.24	\$ 365,838.46	\$4,564,755.02

Plus: * Expenditures by Other State Departments From Fish Fund:

* Department of Revenue—Printing Fishing Licenses, Tags and Miscellaneous Forms	\$1,551.04
* Department of Forests & Waters 1969-1970 (Project "70"—Real Estate Taxes)	1,154.38

* Total Expenditures by Other State Departments from Fish Fund \$ 2,705.42

TOTAL EXPENDITURES \$4,567,460.44

Cash Balance June 30, 1971, Available for Expenditures in 1971-1972 Fiscal Year 4,438,553.55

Plus: Unpaid Vouchers in Fiscal Offices as of June 30, 1971 79,380.83

Cash Balance in State Treasury to Credit of "Fish Fund" June 30, 1971 \$4,517,934.38

(*) Items paid out of the "Fish Fund" upon requisitions drawn by other departments are included for a complete presentation of the "Fish Fund" finances.

STATEMENT OF CASH BALANCES

Cash Balance in State Treasury to Credit of "Fish Fund" July 1, 1970	\$4,051,485.46
Less: Unpaid Vouchers in Fiscal Offices as of June 30, 1970	58,365.07
Net Cash Available for Expenditures as of July 1, 1970	\$3,993,120.39
Revenue Received July 1, 1970 to June 30, 1971	5,012,893.60
Total Funds Available During Year	\$9,006,013.99
Less: Expenditures July 1, 1970 to June 30, 1971	4,567,460.44
Cash Balance Available for Expenditures in 1971-1972 Fiscal Year	\$4,438,553.55
Plus: Unpaid Vouchers in Fiscal Offices as of June 30, 1971	79,380.83
Cash Balance in State Treasury to Credit of "Fish Fund" June 30, 1971	\$4,517,934.38

EXPENDITURES IN COMPLIANCE WITH ACT NO. 673

SESSION OF 1959 AND ACT NO. 458, SESSION OF 1963

Act No. 458, Session of 1963 amended Act No. 673, Session of 1959. This Act became effective March 1, 1964 and provides that the sum of fifty (50) cents from each resident and non-resident fishing license fee shall be used exclusively for (I) the acquisition, leasing, development, management and maintenance of public fishing waters and of areas for providing access to fishing waters and the carrying out of lake and stream reclamation and improvement; (II) the rebuilding of torn out dams, and (III) the study of problems related to better fishing.

EARMARKED FUNDS

For the Fiscal Year July 1, 1970 to June 30, 1971

<i>Classification of Expenditures</i>	<i>Fishery Management and Research</i>	<i>Land and Waters Management</i>	<i>Engineering and Development</i>	<i>Totals</i>
Salaries	\$ 183,397.12	\$ 186,154.70	\$ 91,237.80	\$ 460,789.62
Wages	32,800.29	22,915.40	33,128.42	88,844.11
Employee Benefits	17,746.01	19,786.90	19,609.10	57,142.01
SALARIES, WAGES AND EMPLOYEE BENEFITS—TOTAL	\$ 233,943.42	\$ 228,857.00	\$ 143,975.32	\$ 606,775.74
Professional and Special Services	\$ 14,199.11	\$ 1,435.10	\$ 435.45	\$ 16,069.66
Printing	423.23	—0—	103.55	526.78
Postage and Freight	965.77	598.68	720.91	2,285.36
Communications, Utilities and Fuel	9,657.05	1,349.15	4,850.69	15,856.89
Travel	13,276.94	6,685.43	4,687.56	24,649.93
Membership Dues and Subscriptions	269.90	52.40	267.00	589.30
Insurance Surety and Fidelity Bonds	1,000.00	1,545.00	450.00	2,995.00
Motorized Equipment Supplies and Repairs	5,584.75	9,860.55	4,561.48	20,006.78
Contracted Repairs & Maintenance Services	683.36	21,439.42	430.48	22,553.26
Rent of Real Estate	720.00	675.00	—0—	1,395.00
Rent of Equipment	6,143.62	510.00	1,306.72	7,960.34
Miscellaneous Materials and Supplies	33,549.14	(3,613.01)	(2,248.28)	27,687.85
Fish Food and Other Agricultural Supplies	220.00	273.26	—0—	493.26
OTHER OPERATING EXPENSES—TOTAL ...	\$ 86,692.87	\$ 40,810.98	\$ 15,565.56	\$ 143,069.41
Motor Vehicles	\$ 8,731.06	\$ 1,539.86	\$ 256.16	\$ 10,527.08
Livestock, Game and Poultry	379.40	—0—	—0—	379.40
Equipment, Machinery and Furniture	46,483.34	11,356.40	25,841.44	83,681.18
EQUIPMENT—TOTAL	\$ 55,593.80	\$ 12,896.26	\$ 26,097.60	\$ 94,587.66
Building and Structures	\$ 459.41	—0—	\$ 101,527.08	\$ 101,986.49
Non-Structural Improvements	—0—	—0—	78,672.90	78,672.90
STRUCTURES & IMPROVEMENTS—TOTAL ..	\$ 459.41	—0—	\$ 180,199.98	\$ 180,659.38
GRANTS	\$ 10,000.00	—0—	—0—	10,000.00
TOTAL EXPENDITURES—Earmarked Funds	\$ 386,689.50	\$ 282,564.24	\$ 365,838.46	\$1,035,092.20

EARMARKED FUNDS

STATEMENT OF RECEIPTS AND EXPENDITURES—ACT NO. 458—SESSION OF 1963

<i>Fiscal Year</i>	<i>Resident Licenses Sold</i>	<i>Non- Resident Licenses Sold</i>	<i>Minimum To be Expended</i>	<i>Expenditures</i>	<i>Over (*) or Under (—) Minimum</i>
1967-68	529,138	17,847	\$273,492.50	\$ 825,018.32	\$551,525.82*
1968-69	601,655	22,271	311,963.00	969,296.11	657,333.11*
1969-70	645,482	26,391	335,939.00	1,057,782.78	721,843.78*
1970-71	694,860	31,667	363,263.50	1,035,092.20	671,828.70*

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF JUNE 30, 1971

FISH FUND	CASH	\$ 930,767.32
	INVESTMENTS—U.S. GOVERNMENT SHORT TERM SECURITIES	3,587,167.06
	TOTAL CASH AND INVESTMENTS	\$4,517,934.38
	LESS: LIABILITIES AND WORKING CAPITAL:	
	VOUCHERS PAYABLE	\$ 79,380.83
	ENCUMBRANCES—PENNSYLVANIA FISH COMMISSION	710,918.53
	ENCUMBRANCES—PROPERTY & SUPPLIES— GENERAL STATE AUTHORITY	81,900.00
	ENCUMBRANCES—TREASURY DEPARTMENT	1,000.00
	RESERVE FOR WORKING CAPITAL	1,800,000.00
	NET BALANCE AVAILABLE FOR EXPENDITURES DURING FISCAL YEAR 1971-1972	\$1,844,735.02

BOATING FUND STATEMENT OF REVENUE, EXPENDITURES AND CASH BALANCES JULY 1, 1970 TO JUNE 30, 1971 FISCAL YEAR	Cash in State Treasury to Credit of "Boating Fund" July 1, 1970	\$671,853.89
	Less: Unpaid Vouchers in Fiscal Offices as of June 30, 1970	2,454.81
	Net Cash Available for Expenditures as of July 1, 1970	\$669,399.08
	Receipts July 1, 1970 to June 30, 1971	
	Motor Boat Registration Fees—Fish Commission	\$496,067.00
	Motor Boat Registration Fees—Delaware River Navigation Commission	57,133.00
	Motor Boat Fines—Fish Commission	14,875.00
	Motor Boat Fines—Delaware River Navigation Commission	1,535.00
	Miscellaneous Revenue—Fish Commission	6,821.73
	Miscellaneous Revenue—Department of Revenue	534.51
	Miscellaneous Revenue—Delaware River Navigation Commission	144.49
	Transfer From Motor License Fund	286,088.44
	Total Receipts From All Sources	863,199.17
	Total Funds Available During Year	\$1,532,598.25

CLASSIFICATION OF EXPENDITURES BY ORGANIZATIONAL UNITS

<i>Classification of Expenditures</i>	<i>Administration</i>	<i>Law Enforcement</i>	<i>Engineering</i>	<i>Totals</i>
Airies	\$ 83,089.00	\$200,059.93	\$6,547.05	\$289,695.98
Agencies	—0—	47,376.33	—0—	47,376.33
Employee Benefits	2,168.06	13,250.54	—0—	15,418.60
Professional and Special Services	7,487.63	415.70	—0—	7,903.33
Printing	4,976.84	17,683.56	—0—	22,660.40
Storage and Freight	2,127.98	927.78	—0—	3,055.76
Communications, Utilities and Fuel	558.81	8,793.75	—0—	9,352.56
Travel	2,230.90	26,836.82	40.90	29,108.62
Membership Dues and Subscriptions	25.00	220.00	—0—	245.00
Motorized Equipment Supplies and Repairs	134.09	11,986.72	—0—	12,120.81
Contracted Repairs & Maintenance Services	77.80	5,992.96	—0—	6,070.76
Cost of Real Estate	—0—	2,666.20	—0—	2,666.20
Cost of Equipment	19.00	—0—	—0—	19.00
Miscellaneous Materials and Supplies	31,978.01	39,115.60	—0—	71,093.61
Motor Vehicles	2,183.96	—0—	—0—	2,183.96
Equipment, Machinery and Furniture	9,433.00	38,074.46	—0—	47,507.46
Building and Structures	—0—	244.87	1,227.38	1,472.25
Non-Structural Improvements	—0—	43,084.04	1,251.28	44,335.32
Funds of Receipts	38.00	—0—	—0—	38.00
Total Expenditures by Fish Commission from "Boating Fund"	\$146,528.08	\$456,729.26	\$9,066.61	\$612,323.95
As: *Expenditures by Other State Departments from "Boating Fund":				
*Department of Revenue—Provide Forms for Registration of Motor Boats			\$84,440.54	
*Delaware River Navigation Commission			66,692.88	
*Total Expenditures by Other State Departments from "Boating Fund"				\$151,133.42
Total Expenditures				\$ 763,457.37
Cash Balance in State Treasury to Credit of "Boating Fund," June 30, 1971				\$ 769,140.88
Plus: Unpaid Vouchers in Fiscal Offices as of June 30, 1971				3,797.44
Cash Balance in State Treasury to Credit of "Boating Fund" June 30, 1971				\$ 772,938.32

These items are paid out of "Boating Fund" upon requisition drawn by other departments and are included for a complete presentation of the "Boating Fund."

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF JUNE 30, 1971

BOATING FUND	Cash	\$772,938.32
	LESS: LIABILITIES AND WORKING CAPITAL:	
	VOUCHERS PAYABLE	\$ 3,797.44
	ENCUMBRANCES—PENNSYLVANIA FISH COMMISSION	167,060.18
	ENCUMBRANCES—DEPARTMENT OF REVENUE	2,748.53
	ENCUMBRANCES—DEPARTMENT OF PROPERTY & SUPPLIES—	
	GENERAL STATE AUTHORITY RENTALS	2,000.00
	RESERVE—DELAWARE RIVER NAVIGATION COMMISSION....	813.00
	RESERVE—WORKING CAPITAL	300,000.00
	NET BALANCE AVAILABLE FOR EXPENDITURES DURING FISCAL YEAR 1971-1972	\$296,519.17



HOW MANY????

During the winter season, I was checking some fellows at Raccoon State Lake when three lads approached. One of the boys said he had caught a trout the day before which was tagged and wanted to know the purpose of the tag. I explained the tag was used for identification purposes in the hatchery. Another fisherman inquired if the other two boys had caught any fish. The youth about eleven said, "Not today, but I caught five yesterday!" Since the daily limit during the winter season is only three, I naturally questioned the lad by asking, "How many did you get?" "Five," the boy proudly answered. "Do you know the limit is only three trout per day young fellow?" I replied. "Oh! is it?", the lad asked with a blank expression covering his face. When I informed the surprised little fellow, "Yes, three." He quickly regained his composure and chimed, "Well, I threw most of them back anyway!"

Donald Parrish
WWP (Beaver County)

ANY "PELT" VALUE?

Luke Hill, Big Cove Tannery, Pa., age 13, son of Harold Hill was trapping muskrats in Cove Creek, Fulton County, and had his traps baited with corn and caught a four pound sucker.

Bryce Carnell
WWP (W. Adams/Franklin Cos.)

ON THE COMEBACK

Last winter I met quite a few hunters in the course of my patrols. In talking to them there were many questions asked concerning the quality of water in the Clarion River, and many many comments about Fishing in this area. The most common comment was, "The Clarion must really be coming back, did you see all of the little Bass swimming around close to shore?" The Clarion River is definitely on a big comeback, and the smallmouth have had two hatches this past season, and one can easily see them swimming in large schools. Fishermen in this area have had great luck

catching smallmouth bass, (one told me of catching 27 in only 28 casts) and a few northern pike have been caught as well.

Robert J. Cortez
WWP (Clarion Co.)

SAD TESTIMONIAL

One day as I returned to my truck parked along a back road, I picked up a beer can lying beside the road to toss it into the bed. It was heavy, so I shook it to empty it of what I thought was mud and water. I couldn't shake it out and when I looked inside the opening I was surprised to discover a garter snake had taken up residence! I think this incident is a sad commentary on what is becoming of our land when it is so abused that nature's creatures are beginning to adapt—and a garter snake has to use an empty beer can as its den!

Larry R. Baker
WWP (Delaware Co.)



ANGLER BONUS

While contacting Issuing Agents recently, I was talking with Mrs. Florence Bucker who issues fishing licenses near Brackney, Pa. I was somewhat surprised when she informed me that after she deducts all of the expenses for bonds, postage,

etc., from her issuing fee of 20¢, the balance of the money brought in from this source is donated to the nearby Silver Lake Rod & Gun Club. This seems to me like a special service to the sportsmen in that area and I'm sure it is appreciated.

Richard R. Roberts
WWP (Susquehanna Co.)

YOU CAN'T WIN!

SWP Robert Snyder was checking a man who was starting to clean his limit catch of trout during the winter season, the man had taken one trout from the stringer to clean it, when the two trout remaining swam away with his stringer, leaving one slightly disgusted fisherman looking bewildered.

G. T. Crayton
WWP (N. Allegheny Co.)

BY APPOINTMENT ONLY!

It was my pleasure to meet this year an elderly gentleman in Columbia Co. who is as enthusiastic about fishing as any youngster I have ever met. He fished almost daily along the Susquehanna during the month of December, and enjoyed his first encounter with the tremendous walleye fishing provided by this great river during the fall and winter.

To introduce himself to other fishermen, he hands out printed identification cards to each person he meets, which read:

Available for—

Fishing—Hunting—Golf—Bridge
JOHN W. EISENHAUER
Retired

125 Park Blvd.
Berwick, Pa. 18603 Phone: 752-3471
I honestly believe that John is getting more from his retirement than most of us get from our so-called active years!

Robert J. Perry
WWP (Columbia/Montour Cos.)

PRIZE CATCH

The sport of fishing often brings more reward than just catching a fish. Such was the case recently when Mr. Leo Lewycky, of Hamilton St., Allentown caught a nice prize while fishing in the Lehigh River near Hamilton St. Dam. His prize wasn't a fish, but a purse he had snagged and drug in to shore. The purse belonged to a woman in Allentown, and contained some valuable cards and other personal items. It had been stolen from her a few days before and apparently the thief tossed it in

the drink after rifling through it.
Mr. Lewycky received a reward of three dollars from the grateful woman for his fine catch.

Frederick Mussel
WWP (Lehigh County)

WATCH IT DAD!

While patrolling a nursery wired area one evening I observed an amusing scene. It was just about dusk and I was preparing to leave as activity had all but ceased, when a pick-up truck backed down the road near the wired area. I watched as a middle-aged man and two young children climbed out of the truck and began fishing. After about ten minutes the man slowly waded down the stream to the wired area. He looked around with a contemplating air and, yielding to temptation, cast his line under the wires. No sooner had the line hit the water when a penetrating scream filled the air. "Daddy, you shouldn't do that, I'm going to tell mommy" screamed the little girl. With that the man immediately reeled in his line, hung his head and walked back to the truck.

I wonder if "mommy" had anything to say when he arrived home? Little Miss "Obey the Law" saved him one hundred dollars . . . if only he knew it!

Special Waterways Patrolman
Burton E. Johnson
Mt. Jewett, Pennsylvania



LITTERBUGS BEWARE!

I think the sportsmen of Pennsylvania are going to have to take matters into their own hands somewhat in the case of littering along our streams and lakes. If the good outdoorsman sees his fellow fishermen, picnicker or whatever, leaving gar-

bage and litter along these beautiful lakes and streams, he should either attempt to tell the man of his wrongdoing or take identification and notify the District Waterways Patrolman or State Police. During the many hours I spend along these areas it almost turns my stomach to see the garbage and litter left by thoughtless so-called sportsmen.

Talking with many of the landowners this is their number one complaint against the fishermen and picnicker. We are going to have to police our own ranks to help correct this problem.

Warren L. Beaver
WWP (W. Crawford Co.)

EEL ALERT

Last year the lamprey eel run was later than usual. It also started on a weekend, so many anglers saw these very large eels in the streams building nests and spawning. I have received three letters from people informing me of the run. Many people fail to realize that this migration has been going on for hundreds of years and these eels do no harm to our streams or fish life, but do afford good fish bait for live bait anglers.

H. F. Reynolds
WWP (Wayne County)

CHANGING TIMES

I have never seen as many winter fishermen as I have this past season! Due to the spring type weather, it seems that everyone wants to go fishing. On Sunday December 26th Lyman Run Lake looked like the Spring opening of trout season. Many left the lake with their creel limit of three trout. Harold Fink, Dist. Attorney of Potter County took a 24½ inch brown trout and Marshall Tarabori caught a 23½ inch rainbow. It seems that all trout have gone vegetarian as more trout have been caught on corn and garden vegetables than anything else, with a piece of cheese thrown in!

Kenneth Aley
WWP (Potter County)

QUITE A MOUTHFUL

While investigating a pollution on Portage Creek, Keating Twp., Potter Co., Waterways Patrolman Aley and I walked out on a small bridge to look at the condition of the water. We spotted a brown trout about 14 inches in length darting toward the bridge pier with a large frog in its mouth. As soon as it sighted us it dropped the frog and headed for the bridge abutment and cover. I doubt very

much that this trout could have swallowed a frog of this size, and I would have liked to have seen the final outcome—a very interesting fight must have taken place!

Stanley G. Hastings
WWP (Cameron Co.)

GREENER GRASS?

While patrolling the West Branch Clarion River after an in-season trout stocking, I pulled into the tambine bridge and parked. Sitting in the car for a moment I observed an auto pull up and a lady got out. She walked over to the middle of the bridge and hollered very loud "Dan they only put two bucketfuls" in here. "You ought to see the brownies they put in up at the county line. She then got no response from Dan, proceeded to the auto and drove off. I chuckled as I thought about that particular stocking. The fish came from the same hatchery and were no bigger at one stop than at another. . . . The only thing I am wondering is what did Dan think and did the lady know for sure who she was addressing?

Bernard D. Ambrose
WWP (Elk County)



THAT'S A "FEW" ANGLERS!

20 years ago on October 20, the first fish were stocked in the Shawnee Lake, Bedford County. 250 helped with the fish stocking and attended a dedication ceremony.

Records and estimates show that close to two million have fished the Shawnee Lake during the last twenty years.

William E. McInay
WWP (Bedford Co.)



For an attractive spot for spring trout fishing or for a spectacular view of mountain laurel in early summer, we suggest you try Clear Creek State Park, near Sigel.

Located in the Kittanning State Forest, Jefferson County, the 1,123-acre park is 12 miles north of Brookville along Pa. Rt. 949. Clear Creek Park derives its name from the sparkling clear natural trout stream which meanders through the park.

A quiet, family-type camping area contains 53 campsites, drinking water and pit toilets. Sites are along Clear Creek and also adjacent to the Clarion River which borders the park on the northwest.

Recreational activities include swimming, fishing and hiking. Swimmers can enjoy a one and one-half-acre pond and beach, approximately two miles from the camping area. A food concession operates during the summer camping and swimming season.

Anglers may fish for brook, rainbow or brown trout in Clear Creek right near their campsites or in one of the many small trout streams throughout the Kittanning State Forest. Besides Clear Creek other nearby trout streams stocked by the Pennsylvania Fish Commission are Callen Run and Cathers Run. In the Clarion River, fisherman can try their luck angling for smallmouth bass, northern pike, walleye, panfish, carp, trout, suckers or catfish.

For the hiker there are 11 miles of well-marked trails which should feature an abundance of wildflowers at this time of year as well as rhododendron galore in early summer.

During summer months a Nature Interpretation Program is offered with a staff park naturalist. Nature activities include guided walks and evening campfire programs.

Family cabins are available for those who don't have their own camping gear, but cabins must be reserved

in advance. Ice and groceries can be purchased in Sigel four miles south of the park. Clear Creek's camping area is full most weekends by early Friday evening in the summer and fall months.

Wildlife which may be seen in the park area include deer, bear, raccoons and rabbits, wild turkey, ruffed grouse and ducks, as well as a wide variety of song birds.

Nearby scenic attractions include Hays Lot Fire Tower from which viewers can see the Kittanning Forest

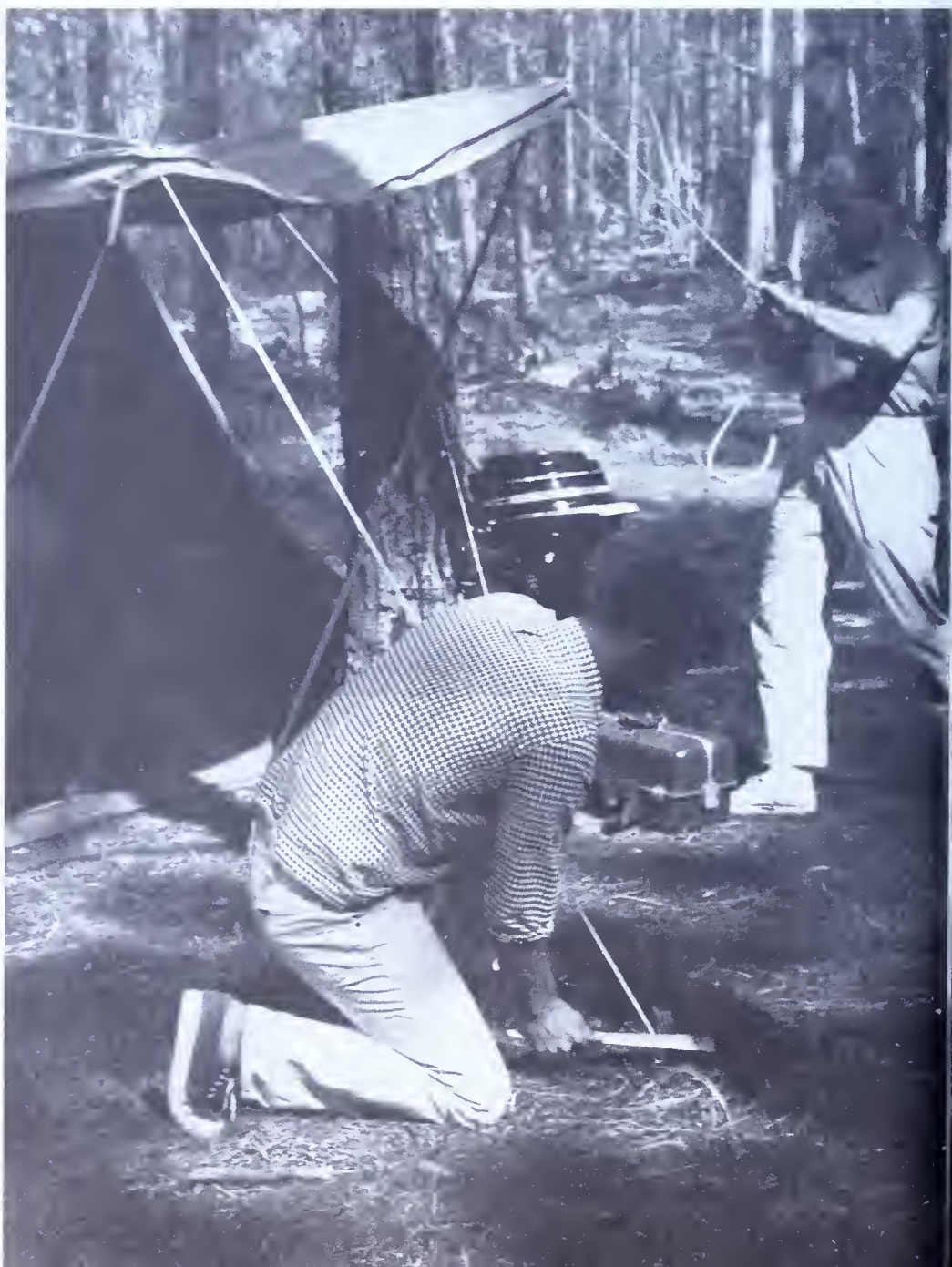
and a portion of the Allegheny National Forest. Bear Town Rocks, an unusual geographical feature, provides an impressive view of the surrounding area.

Each summer the Western Pennsylvania Laurel Festival is held in Brookville and Sigel including tours of the United Natural Gas Company's Laurel fields at Sigel. Day-long activities are scheduled and a queen is crowned. In the fall a foliage festival is held at Clarion, within easy driving distance.

Other attractions, a pleasant drive from Clear Creek, include 8,000-acre Cook Forest State park (camping facilities there will be covered in detail in a future column) and the Allegheny National Forest.



Anglers hurry to pitch camp so they can enjoy a day's fishing.



NEW FUN—NEW OUTLOOK

continued from page 17

When I fish alone, I could return home with a fish that would merit a citation anywhere and it would not mean beans to her. When I come back from a fishing trip with a colorful rock as big as my fist, I am the conquering hero.

We fishermen do not always find fish, but it is certainly unusual if we fail to encounter rocks while fishing. Take a close look. Break one in two or knock off a chip. You will be intrigued with what you find sometimes.

Twenty dollars will buy a rock tumbler, the grinding and polishing compounds and the instruction

book to get you started. There is a lot of stuff about sedimentary, igneous and metamorphic rocks, where to look, etc. That can come later. To begin with, if a rock is pretty and sufficiently hard so that it can not be scratched with a knife blade, it can be crushed and tumbled with very satisfying results.

Is twenty bucks too much for a fisherman to pay for a little additional serenity?

Any guy who loves to fish, but who is bothered from time to time by guilty thoughts about the "fishing widow" back home, might find, as I have found, that "rock hounding" eases the pressure and, also, provides an opportunity for the enjoyment of a gratifying hobby. One which does not impose great demands on his fishing time and one which his wife may share with enthusiasm.

POTTER COUNTY

Holds 2nd Annual

Angler's Exhibit

The Potter County Anglers Club and the Raymond Richer Post, VFW will hold their Second Annual Angler's Exhibit the weekend of April 8th & 9th. Exhibits by the Pennsylvania Fish Commission, Orvis, South Bend, Gaines Co., and others will make it an interesting affair. Something new for this year: "A Fisherman's Flea Market"! The indoor affair will be set up in the VFW's Galeton hall.

WATER POLLUTION —

DETECTION AND CONTROL

cleaner streams our goal

The two day in-service training conference held January 27th and 28th, at Camp Hill, is typical of the Pennsylvania Fish Commission's continuing effort to keep its personnel fully informed of new techniques as they develop and as they apply to the agency's operation.

The essence of Executive Director Ralph W. Abele's opening address will be found in his editorial on the inside, front cover.

The theme of the conference, "Water Pollution Detection and Control," was prepared by Harold Corbin, Chief of the Division of Law Enforcement, and the program featured a number of speakers from the Department of Environmental Resources. Co-workers in the fight for clean water, and speakers during the conference, were: William Guckert, Chief of the Division of Mine

Reclamation, DER; Walter Kohler, Chief of the Bituminous Strip Mine Section, DER; Ken Schoener, Assistant Chief of the Division of Water Quality, DER; and Stan Wolfe, Director of the Environmental Pollution Strike Force.

John Thompson, a former staff member of the Pennsylvania State Police and now a member of the faculty at the Harrisburg Area Community College, spoke on "Interview and Interrogation Techniques."

Other speakers included: Richard Evans, Office of Administration, who spoke on Labor Relations; Capt. C. E. Leising, Director, Bureau of Waterways, Edward Miller, Director, Bureau of Engineering and Fisheries; Jack Miller, Chief of the Environmental Services Branch; and Bob Brown, Chief of the Cooperative Nursery Branch.

The "Thin Green Line" investigated 390 cases of pollution last year, with 264 of these resulting in prosecutions. While 58 of these cases are still pending, only 5 cases were lost in the courts—a fine testimonial to the competence of the Enforcement Division in their determined effort to curb pollution in the waters of the Commonwealth!

"The Thin Green Line"



STONE RUN

continued from page 15

mied before him. What he does not remember he must have backed out of there ever so slowly. What he does remember: he must have backed out beads of sweat all over his body and standing there in the pouring sunshine and thinking, "Am I done now? Is this the end of Joy?"

No, it was the end of a method, that's all, the end of a technique. Not without a tightening of the breath, the boy slipped into the waters and in his sneakers waded the stream, upstream always, casting carefully ahead into the pools and riffles that he understood. With much success.

Six o'clock. Again a good hour for fishing. But Time did not allow, and the boy, far upstream now, and hopelessly out of crickets anyway, parted the bamboo at the joints, pocketed the little reel, and made his way into the woods to a deer trail he knew well.

Downstream now as the forest folk made ready for the night. Quietly in his wet sneakers he trod the wrinkled woodland trail. Nothing much escaped him. Sounds: the sharp snorting of a buck that had winded him, the "wood-pee-wee-e" of that little ball of feathers, the drumming of the ruffed grouse, the final dizzy rapture of the vesper birds. Sights: the red-tailed hawk in a silent soaring overhead; a deer mouse darting into a hollow log; a porcupine lumbering over the rocky ledges on the side of the slope to the left of the trail. Once he saw a weasel in hot pursuit of a chipmunk, and he interfered. Not an easy matter. A question of right, to begin with. And then the fierce little animal would not be discouraged by the bamboo cane. It was only after the boy had taken up the panting ground squirrel and carried it away that he could be sure it would survive the encounter. The boy believed in the rhythms of nature, but . . .

Up the steep trail now in the growing gloom of the springtime mountains, with the lunch he had retrieved. Bicycle, dirt road, hard road, the city lights. Was it Clearfield, or Chinklacamoose?

This was his spring and summer. This was the green and the gold. This was the Time. This was the time, as the poet knew, when meadow, grove and stream, the earth, and every common sight did seem apparelled in celestial light.

The boy worked hard through the week. Those days belonged to his mother. But Saturday was his day, and Sunday was his day, too. And these days began in darkness and ended in darkness, and there were the mountains in between.

As Time carried him out of spring and into summer the forest changed. Ecstasy was sobered some, and the plaintive call of the thrushes plainly asked what to make of a diminished thing. But the trout were there, and especially they were there when dawn lay on the water. Only now he didn't carry crickets—grasshoppers they were in the Mason jar, tiny grasshoppers which he had captured from the river reeds along the Susquehanna. Better still were the little green prism grasshoppers which were so abundant in the July mountains. These the boy did take time out for during the day. These were the most enticing to the brook trout, and they were right there along the stream.

One evening, just as the boy returned to the hiding place of his machine he was startled to find sitting there on a stump a lad of about his own size and age. In fact, though vanity was not a weakness of his and he was not really sure how he looked to anyone else, the boy fancied that someone who knew him only casually might easily mistake this youngster for himself.

"Hi, there," the stranger said, and "Hi," the boy returned.

"Been watching you, a long time now. I like the way you fish, and I like the way you walk through the woods."

"Gosh, do you mean. . . . Say, do you live hereabouts?"

"That last little shanty you pass on the Mt. Joy road, not a far piece from here."

"And you like to fish, too? What's your name?"

"Oh, folks just call me Duke. And I know your name—if that's it spelled out there on the bicycle. From Clearfield, ain't you?"

Time had begun another chapter for the boy. Casually but firmly. This was a Sunday evening, and the two arranged to meet on the next Saturday morning. "I want you to stop at my house, and we'll have pancakes before we start out," Duke suggested. "Course you'll have to leave town a little earlier if we're going to have breakfast. But I'll be up. Come on, I'll show you my house and have you meet my Ma."

The boy was at the ramshackle little house at the appointed hour, even before, and Duke was up. And so was his mother. And such pancakes, with unadulterated maple syrup and homemade butter! Fortified against the day the youngsters set out, and with them a third, for Duke had a dog. Jack was his name, and he was a mongrel for sure, but affection was his forte. He thrived on it, going and coming. "Won't bother the fish," said Duke. "Stays way back and just watches."

Duke preferred Stone Run to Lick Run, too, same as the boy. "My stream," he said when they got there. And the boy said, "Yes, my stream, too," and each perfectly understood the other.

They fished the same, these two, with short bamboo rods and makeshift tackle and grasshoppers now in the summer heat (Duke said he liked crickets in the early going), and both released each fish that was taken, in tenderness and reverence.

Duke showed the boy some favorite riffles, and the boy showed some to Duke. At one pool far upstream, Duke took on a more paternal manner. "Here," he said, "at this place you've been fishing all wrong. Watched you twice."

It was a beautiful pool. At one side of it an enormous slab of rock sloped down into the water and clearly left a chasm underneath. The water rushed into this pool in a strong current, churning up the gravel at the bottom and frothing at the surface. Angling appeared to be quite impossible. The boy had fished it somewhat indifferently in the past.

"Big, big brown trout in there," said Duke. "Need a heavy sinker, and you'll have to start your 'hopper right there." And Duke showed the boy what he meant. "I've caught him twice, and I've lost him twice. It's only half the battle hooking him, all rough and tangle underneath that rock."

Time allowed for mighty prepara-

The author, William W. Betts, Jr. is Associate Dean of the Graduate School and Professor of English at Indiana University of Pennsylvania and proudly announces he's in his third year as a Deputy Waterways Patrolman for Indiana County. Mr. Betts has published three books and numerous magazine articles.

tion, and Patience took over on the spot. First the boy and then Duke himself, while Jack lay idly in a hollow of the rock, searched the swirling depths with a grasshopper. Both boys sensed the presence of a beautiful, strong fish underneath that rock, but today was His day, and he would wait.

The boys moved on, taking turns for the really choice spots, and enjoying each other's art. It was camaraderie, and it was new to the boy, and it was new to Duke, and it was better than fishing alone.

Thus the summer ran its raptures through. Brook trout and brown. Grasshoppers. Sinkers. White water and still. Duke and Jack and the boy.

Duke showed the boy the forest farther to the left and right of the stream. He showed him a bee tree, and a live beaver dam, where the youngsters one day required of Time the chance to watch the busy colony. "Trout in that dam, too," said Duke. "We'll fish it some day." He showed the boy the muskrat tracks and slides at the dam, and where the coons had dined on mussels. High above the beaver dam in the awesome rocks on the ridge he showed him where the rattlesnakes assembled in tribes, and farther down where there had been a den of foxes earlier in the spring. In the beech groves he showed him the

wild turkey scratchings, and once even where the flock had been roosting, their droppings black and white stains on the forest carpet. But what Duke saved for last was best of all.

One day, when they were at the flat rock (every pool had a name now), Duke turned to the boy, "I think we are ready for Lennie's Run."

"Lennie's Run? I've never heard of that," said the boy. "Do you mean a stream to fish? Is it far?"

For answer, Duke only turned and beckoned. Toward the end of Stone Run they turned west and began to follow Lick Run upstream. Nearly a mile upstream on Lick Run from the point at which Stone Run enters the larger stream they came to a swampy place. It was all swamp off to the right for some distance, and Duke plodded straight through it, angling north now and away from Lick Run. Soon, at the base of a sharply ascending hill it became plain that the swamp was the delta of a little trickle of water that came spilling out of the mountains here.

Duke had paused, and the boy ventured, "Do you mean here? Do you mean there used to be a stream here?"

"Come on," said the other. And they began to climb after the trickle. Now the boy began to understand. Here was a deep pool formed among

the rocks at one level of the slope, and just beyond, farther upstream, was another, and beyond that still another. The bamboo was hurried into action. Duke watched with Jack while the boy took trout after trout from each of these tiny pools up the mountainside. Small trout they were for the most part, but genuine mountain brook trout, and, because the pools were dark, the trout were intense in their colors: black and white and orange and red. "Wow!" shouted the boy, and "Come on, Duke! Try the next one." It was a delirious afternoon.

On their way out of the woods that night, the boy inquired of Duke, "Say, why do you call it Lennie's Run?"

"Lennie discovered it," said Duke. "Summer before last. She was my sister, kid sister. She died last winter of pneumonia. So it's her stream, do you see. And you're the only one I've ever showed it to, or ever will."

Since then 'tis centuries, and October's blood is running now. The Great War brought an end to fishing that brought an end to all. And the boy, now a boy no longer, has not seen Stone Run, or Lennie's Run, or Mt. Joy, or Duke and Jack, in all that time. What are these now, and where?

Ah, Duke. . . . There was a Time. . . .

SAFE BOATING SCHOOLS IN PROGRESS

Following is a listing of Boating Schools scheduled throughout the Commonwealth by the Pennsylvania

Fish Commission and the Coast Guard Auxiliary. The PFC three lesson, six hour course, titled "Boating Pleasure,"

is a free course for all age groups. YOU are cordially invited to attend.

- REGION I (Northwest)**
April 11, 18 & 25—7:00 to 9:00 PM
Kane Jr. High School
Kane, Pennsylvania
April 12, 19 & 26—7:00 to 9:00 PM
Bradford Sr. High School
Bradford, Pennsylvania
April 5, 12 & 19—7:00 to 9:00 PM
Curwensville High School
Curwensville, Pennsylvania
- REGION II (Southwest)**
March 22 & 29, April 5—7:30 to 9:30 PM
Allegheny Center Mall (Community Room)
Pittsburgh, Pennsylvania
March 23 & 30, April 6—7:30 to 9:30 PM
John Dewey Jr. High School, 1100 Washington Ave.
Carnegie, Pennsylvania
- REGION III (Northeast)**
March 29, April 5 & 12—7:00 to 9:00 PM
Northumberland County Courthouse
Sunbury, Pennsylvania

- March 20 & 27, April 3—7:00 to 9:00 PM
Pike County Courthouse
Milford, Pennsylvania
- REGION IV (Southeast)**
April 24, May 1 & 8—7:00 to 9:00 PM
Carlisle Fish and Game Association, Off Route
641 East, Carlisle, Pennsylvania
April 24, May 1 & 8—7:00 to 9:00 PM
Nether Providence High School
Wallingford, Pennsylvania
April 5, 12 & 19—7:00 to 9:00 PM
Municipal Recreation Center, 235 S. 3rd St.
Chambersburg, Pennsylvania
April 3, 10 & 17—7:00 to 9:00 PM
Whitehall Mall Community Room, McArthur Blvd.
Whitehall, Pennsylvania
April 4, 11 & 18—7:00 to 9:00 PM
Habilitation Inc., Bldg. 18th & W. Market Sts.
Pottsville, Pennsylvania
April 3, 10 & 17—7:00 to 9:00 PM
Caterpillar Tractor Co., Auditorium, Memory Lane
York, Pennsylvania

- Also beginning in February: 8 Week Coast Guard Auxiliary Boating Schools*
- March 8, 15, 22 & 29, April 5, 12, 19 & 26—8:00 to 10:00 PM
Butler Senior High School
Butler, Pennsylvania
- March 8, 15, 22 & 29, April 5, 12, 19 & 26—8:00 to 10:00 PM
Pioneer Hose House (Fire Company)
Brackenridge, Pennsylvania
- March 14, 21, & 28, April 4, 11, 18, & 25, May 2—7:30 to 9:30 PM
Monroeville Mall (community room) Route 22
Monroeville, Pennsylvania
- February 27, March 5, 12, 19 & 26, April 2, 9, 16—8:00 to 10:00 PM
Oakmont Yacht Club, 11 Washington Ave.
Oakmont, Pennsylvania

If you plan to attend any of these courses, drop a note to your District Waterways Patrolman to that effect.

Give your name and address and the number in your "party." His name, address, and phone number appear in

the back of your 1972 Pennsylvania Pleasure Boating Requirements pamphlet.

A "Check-Up" now guarantees . . .

AN EARLY START

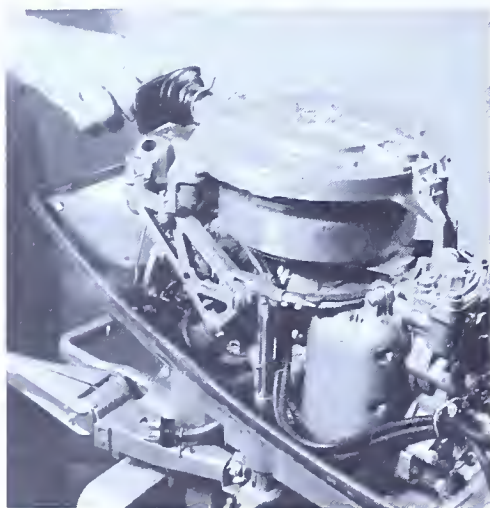
for the boating season ahead

by Robert G. Miller

Spring is in the air and if you're planning some early boating this year, now is the time to begin thinking about, *and doing something*, to get that early start.

Before we even think about launching the boat for the first time there is such a thing as preventive maintenance, making a thorough inspection at regular intervals to prevent problems before they develop.

For example take the outboard which we assume was in good running condition last Fall and requires no major overhaul. If it does require the latter—preventive maintenance



won't do one bit of good. The problem already exists and the damage is done.

First remove the cowlings, chase the spiders that may have hatched out on recent warm days, brush aside the cobwebs and clean all accessible powerhead parts.

For outboards with magneto ignition systems, remove the spark plugs and rotate the crankshaft by operating the starter to remove oil deposits that have formed in the cylinders and crankcase during prolonged storage. Also inspect the manual starting rope for wear. You may never need it but its embarrassing, when you do need it, to have it fall apart in your hands.

The battery used for powering elec-

tric starters should have been removed last Fall, then charged and stored in a cool, dry place. This should be removed from storage, recharged and then check the battery water level at least monthly during the Summer season.

You might also check the spark plug leads for damage or deterioration, especially where the insulation comes in contact with the metal parts; and although the manufacturer suggests checking and resetting the plugs it's much cheaper in the long run to replace them with a new set of plugs. You can always have the old ones cleaned, reset to the manufacturer's specifications and kept on hand as spares.

When you replace those plugs be extremely careful that you do not damage the threads in the cylinder block. First set the plug fingertight on the gasket, then tighten one half turn with a wrench, and reconnect each spark plug lead to its proper plug.

Check fuel lines and fittings for damage or loose connections. Clean the fuel filters on the engine and in the fuel tank, dump the remains of last year's fuel and refill the tank with a fresh mixture of fuel and oil as recommended by the manufacturer.

Before replacing the cowlings, you might also check for loose, damaged or missing parts; lubricate the lower drive unit, check water inlet ports to make sure that the cooling water flow to and from the engine is unobstructed, and remove the propeller and inspect the blades for cracks or bends.

If the latter is in bad shape, install a new prop for the season but, keep the old one as a spare. Any nicks and burrs can be removed or trimmed with a file but take care that you remove as little metal as possible.

Are you one of those boaters who launches his boat in the Spring and leaves it moored on the water until Fall, or do you keep it on a trailer and use it about every weekend?



If included in the latter have you ever considered the amount of strain your line, attached to the winch, goes through each time you launch or haul out your craft?

Probably you haven't and the only time you might do something about it is after the line parts and you go wading after the boat.

Actually, when the rig was stored for the Winter, the line should have been removed from the winch and allowed to dry thoroughly. Dampness is retained when the line is left on the drum under tension and the first thing you know the drum begins to rust.

If you haven't done this, remove it now, before the first launching and check the fibers for any breaks, replacing the line if necessary. Inspect the rim of the winch to make sure that it is smooth and beveled outward so that the line will pay onto the drum without snagging or chafing. Study the method by which the line is attached to the drum. To prevent chafing or pinching the line, wrap friction tape around the metal clip or bolt head after the line has been attached.



FISH TALES

by Doris Katsonis



KIRK ADAMS, 5, of Harrisville, caught this nice largemouth bass from his grandfather's farm pond. He wanted to keep it but had to throw it back because it was out of season. He wants to grow up to be a Commissioner like his Uncle Jim



DANNY KAMINSKI, Winchester, Va. won a senior citation with his catch of a 15½ inch bullhead. He used spinning gear and a black roostertail spinner at Cowans Gap.



EDDIE BURR of Pittsburgh (left) caught his 26 inch carp from the Allegheny River in Allegheny County. It weighed 12 pounds and hit on corn. GEORGE EUKER, JR. (right) of Hummelstown became an honorable mention Husky Musky member with this catch—a 37½ inch from the Susquehanna.



MILO MACESICH, E. Pittsburgh, displays the carp he caught from Turtle Creek near his home last May. He used spinning gear and corn to lure the beauty. It weighed 12 pounds and measured 26 inches.



A Pittsburgh angler, LAWRENCE R. MIKALIK, caught his 22 inch, 5 pound, largemouth bass from Pymatuning Reservoir. It took a minnow one day last summer.



These two boys each caught a beauty—a 22 inch rainbow. DALE WAYBRIGHT, 13, of Annville (left) caught his from Bachmans Run while CRIST SABELLA of Cherry Tree caught his from Beaver Run in Clearfield County. Dale used a fly rod and minnow to entice his trout.



Eels are back in the Susquehanna as evidenced by ROGER GREGORY's (left) catch last May. He lives in Nicholson. ANTHONY CAMMISA (right) proudly holds his first fish—a 12 inch palamino trout taken from Little Connoquenessing Creek.



DAN WILLIAMS of Tyrone (left) landed these three largemouth bass at Lake Glendale last summer. They hit a plastic worm and measured from 10 to 17¾ inches. CHARLES DELOE, 10, of Emlenton caught his two walleyes from Pymatuning Lake. They measured 20 and 21 inches.



SCOTT WEIDNER, 5, of Richfield proudly shows his 31 inch carp caught with spinning gear and corn from the Juniata River in August while ALBERT VOLPE (right) gets an assist from Betty Rota to display his catch of a 30 inch northern pike taken from French Creek. Mr. Volpe lives in Lansdale.



Little CHUCKIE ZIELINSKE, 4, of Coraopolis (left) holds the 18 inch sucker he caught in West Hickory Creek in Forest County, while an ardent fisherman, JAMES BORGER, of Saylorsburg, holds the smallmouth bass he caught from the Delaware River in Monroe County. He used spinning gear and a rapala.



A Johnstown angler, PAUL TREXLER, holds the 20½ inch brown trout he caught from Clover Creek this past spring. LEONARD VINSKI and brother WILLIAM VINSKO (right) display a good Saturdays catch—21 bluegills and two 14 inch trout. They caught them through the ice at Lake Carey on jigging poles using golden grubs and worms for bait.



SHAWN NAKICH, 7, of Sharon fondly holds the 33 inch northern pike he landed at Shenango Dam using spinning tackle and a fathead minnow.



Another successful northern pike fisherman is JOHN CORNELL, 7, of Sharpsville. He caught the big fellow at Shenango Dam last July. He also used spinning tackle but his bait was a nightcrawler.



Still another northern pike, this one a 39 incher, was caught by DAVID BODIEN of Masury, Ohio. He landed the monster at Shenango Reservoir in May.



A York youth, CHUCK NACE, (left) caught his rock bass from the Susquehanna River using spinning gear and a rooster tail. It earned him a junior citation. VICTOR KOROUGH of Jacobus also earned a senior citation with his catch of a 17¼ inch yellow perch caught while spincasting with a purple plastic worm at Lake Marburg.



PAUL SESEK II, of Newell, earned a Jr. Citation with this catch of a 13¼ inch yellow perch from Yough Dam while RICK ASHTON (right) of York earned three citations, both Jr. and Sr., for his three bullheads ranging in length from 14 inches to 16 inches. He caught them at Pinchot State Park last June.





Two Washington Boro boys, GREG DOUTS and TONY DUKE, caught their 14 inch crappies from Wertz Creek in Lancaster County. Both earned Jr. Citations. MARY ANN KILHOFFER, 10, of Ridgway caught her 14½ inch catfish from Ridgway Reservoir and also earned a Jr. Citation. BRIAN ERICKSON (far right) caught this 21 inch brown trout on the Bennetts Branch, lower end of Mountain Run. All four youngsters were using spinning gear.



A Sr. Citation winner, LEONARD WHITMAN of Franklin, caught his 11 inch bluegill from Tamarack Lake last June while DAVID SWIGART (right) caught his 15 inch yellow perch at Wolf Swamp in Monroe County on a spinner. He lives in Bethlehem.



CHARLES WATSON (left) of Willow Street holds the 23½ inch largemouth bass he caught at Octorara Lake using spinning tackle and a plastic worm. JIMMY JOE KOSIOR holds the 20 inch largemouth bass his father, JOSEPH, caught in the Allegheny River last August.



GARY BROPHY of New Castle holds the big walleye he landed on a June bug near Whaley Island. It measured 27½ inches and weighed 7½ pounds.



A Red Lion resident, ROBERT YOUTZ, shows the huge 38½ inch northern pike he landed while fishing at Codorus State Park last May. It measured 38½ inches and weighed 11 pounds. He earned a Sr. citation for the catch.



PAUL R. KEIM of Elizabethville holds the two smallmouth bass he caught from the Susquehanna in June. The larger one earned a citation—22 inches.



7 year old COTY PEDGERNIK of Natrona Heights used a discarded "torpedo" to catch his 12½ inch crappie, his first fish. He measured it and released it. He just couldn't eat that fish! STEVEN SNYDER, 7, of Duncansville (right) holds the 15 inch bullhead he caught from the Juniata River in June.



RAY SCALA, 6, of Wampum, holds the two carp he caught on nightcrawlers from Little Beaver River. They measured 20 and 17 inches. (right) a Philadelphia youth, PAUL ZELNICK, holds the 29 inch carp he caught from the Susquehanna River in Northumberland County last June. It weighed 15 pounds.



Fishing Outlook

continued from page 5

much more will be demonstrated. It's amazing to see the care and caution that is taken with a huge 30 pound female Musky in relieving her of her burden of eggs. The anesthetizing, measuring and weighing, the taking of the eggs and the gentle return to the holding tank until she recovers is really a delicate chore. Our Linesville Hatchery is located in Crawford county and is just a mile or so south of the town and Rt. 6.

Now for the third factor—*management* of these waters and fish. As you can gather from the preceeding, the management of our fish raising stations and the acquisition, development and maintenance of our lakes and access areas couldn't be in better hands. These people have done an outstanding job in the past and will continue to do so. This leads us to yet another group within our commission and it is one of the keys to our success, the Waterways Patrol-

man and his deputies. They are the link between the average fisherman, sportsmen's organizations and county officials—to the Fish commission. These are the fellows who must see that laws and regulations set up to provide equitable utilization of our waters will be carried out. Too often when there are gripes or complaints they are the first to hear about it and when the bouquets and plaudits are handed out . . . they are last in line.

Our field force today numbers 66 men of which 48 are graduates of the H. R. Stackhouse School of Fisheries Conservation and Watercraft Safety. Today we have a combination of field men—some seasoned veterans in conservation law enforcement; some who have settled nicely into the now familiar variety of duties, and the newer men who are just getting acclimated after a hectic first several years in the field. The duties and responsibilities of the Waterways Patrolman runs the gamut from explaining how a fish swims to a kindergarten group to citing a billion dollar corporation for pollution of our wa-

ters. Quite a job!

The education and training of our field force covers a wide range of subjects. The Waterways Patrolman must not only know the law, he must be able to see that these laws are carried out according to the interpretations of the courts. This, at times, gets pretty technical. Fish law, fishing schools, baits, lures, flies, boats, boating laws, boating schools, public speaking, channel changes, farm ponds, pollution investigation . . . the list could go on and on! This training and knowledge is also passed on to the deputy force in regular training sessions.

So, after all this, just what is the outlook for future fishing? GREAT! The good fishing we know now is going to get *better* and *better*. The young parent of today who just can't wait to get their sons and daughters out on Opening Day can rest assured—when opening day, 1999, rolls around, these same sons and daughters, with children of their own will have a place to fish . . . *and there will be fish to be caught!*

Leaky Boots

continued from page 3

Commission has done and *I'm sure will keep doing.*

CHARLES ZLOCK, JR., Warminster

Let's give credit where it's due, Charlie—our beautiful State Parks are the handiwork of DER's Bureau of Parks. When it comes to the FISH in them, that's where the Fish Commission enters the picture.

I agree with you boat-wise. Some of my happiest and most productive fishing days were spent in a boat! Ed.

FUN ON A BUDGET!

I don't know how many years I have yet to see, much less catch a citation largemouth bass, but by now I feel that I am an expert in my own environment of fishing for largemouth and the best I've ever had was an 18". I feel frustrated and I am beginning to wonder if that magical 23" exists in these Presque Isle waters. So, I am curiously asking, will you run an article or give us some facts on how many of these citation largemouths were caught and *particularly, for me, if ever in Presque Isle waters.*

And this time I'll give your Commission "beaucoup" compliments on

their contribution to the Erie County Sportsmen's rally at Belle Valley Hose Company, Erie, for the interesting, informative talk on coho. It was a good group, Mr. Miller was very informative, Norm Ely, as usual provided a good deal of local information and Jim Dallas had some good reports on the coho runs. Had a good look at Walnut Creek. You people are doing a lot for this little section in north-west Pennsylvania including the musky fingerlings put in Erie Bay today.

As of today my license has "cost" me about $\frac{3}{4}$ of a cent per hour and in this day of inflation that is mighty cheap recreation. I know I lost more than that in lures.

No more accolades—

EVAN G. THOMAS, Erie

Go on Evan, we've got lots of space! At the moment I can't think of anything else that comes as cheaply as $\frac{3}{4}$ ¢ per hour—can you? Between 1968 and 1971 (both inclusive,) 64 CITATION Largemouth Bass were caught by PENNSYLVANIA ANGLERS. They measured from 23" to 27", but sorry to say, only 2 of them from Presque Isle waters. Ed.

DELIGHTED VISITOR

Enclosed find check for 2 gift subscriptions—I am delighted with your monthly magazine—

I only wish NYS had a similar one. In one issue you mentioned fishing in Fairview Lake after Dec. 1 and also Lake Wallenpaupack. I was there Dec. 5th (on the latter lake—) there were over 100 fishermen in one area—many fine trout were caught that day—unfortunately, I did not get any trout but I did enjoy myself.

On Dec. 10th I fished Fairview Lake as the ice was out and most of the fellow anglers caught their limit of three fine trout; myself included.

Thank you very much for giving us an opportunity in the winter to go fishing in Pennsylvania.

Please send out two applications for out of state fishing licenses.

Keep up the good work.

LOU GUTOWSKI
New Hyde Park, New York

Welcome to the fun Lou! We're glad to have you. Ed.

NOVICE FLY TYER

I would like you to keep up the good work. I enjoy to read the Angler every month. I am not a good fly tyer but I am going to take a class in January, and I am going to use the tying part every month. Thank you for this fine magazine.

SAM CAPAZZOLI, Pittsburgh

BACKYARD FISHING

Illustrations—Nick Rosato

by Nancy Mohr

A friend tells the story of slipping off to his favorite stream before dawn one misty morning early in the fishing season. "There I was, all alone, enjoying the quiet dawn. I had slipped by a group of fishermen downstream, determined to catch my first fish of the day in solitude. Well, I did get that first fish and it was a beauty, but less than five minutes after he splashed his way into my creel I was surrounded by the downstreamers. The splashing had carried beautifully on the early morning air and everyone wanted to share my success. Through the rest of the day I found it impossible to fish alone so I decided to go home and build myself a pond!"

Building a pond wasn't all that easy, nor is keeping up the conditions that support a good fish population, but the friend now has his solitude and he has happily learned a great deal about the habits and environment of his favorite fish.

Pond building is much more scientific than going out in the backyard and digging a hole. Once in a while a lucky farmer with a bulldozer manages to get fair results, and his pond will be relatively successful for a season or two, barring major floods or droughts. A pond will last a lot longer though with the help of the Soil Conservation District engineers or a contractor who specializes in pond planning and construction. Each Soil Conservation District also offers financial assistance when their plans are followed to the letter. It is usually wise to compare the contractor's estimate for his plans and his esti-

mate for the SCD plans before deciding on one or the other. Each may be preferable depending on the demands of the project.

Ponds are built for fishing, livestock water supply, irrigation, game and wild life preservation, water control, boating, swimming and fire protection. Any one of these purposes is usually quite compatible with the others, supplying any one pond with multiple uses. On a farm or near a vacation home, the pond becomes a center of activity for family and friends.

There is some dispute as to what constitutes a pond, and when a pond becomes a lake. Most authorities agree that anything under 4 or 5 acres is a pond. Farm ponds run from 1 acre up, but anything under an acre is unsuitable for fishing. A new pond may cost \$1,000 to \$10,000—depending on size and obstacles encountered in the construction phase.

In Chester County, for example, the Soil Conservation District plans and oversees the building of about fifteen ponds a year. District engineers study the terrain and water sources, supervise construction and educate owners in the basics of pond management. They check the condition of the pond during filling and after heavy storms. The average cost to the owner of an average size SCD pond is around \$3,000, less the financial aid.

In the same county, one contractor who builds twelve to eighteen ponds a year, (sometimes with the SCD) estimates the cost of pond building at \$1,500

continued on next page





BACKYARD FISHING

continued from preceding page

to \$2,000 per acre and usually can complete the job within two weeks. The majority of the ponds he builds are $\frac{1}{2}$ to $3\frac{1}{2}$ acres. He also does some reclaiming of ponds and lakes that have filled with silt or been classified as "dead", lacking the ability to support aquatic life.

For both the SCD and the contractor, the pond building seasons are summer and winter when the ground is sufficiently firm to support heavy equipment. The equipment involved in any pond operation may include loaders, bulldozers, cranes and drag-lines, depending upon design, location and unexpected problems.

When our fisherman friend decided to build his pond, he discovered many facets of pond building that had never occurred to him before. For one, he thought that all he had to do was dam up the pretty stream that flowed through his meadow. The contractor took a dim view of this plan and took his borings for the clay content of the soil a goodly distance beyond the stream's flood plain. (An adequate clay content is necessary for a non-leaky pond.)

As he explained it, one of the most important requisites of a long-lived pond is an adequate, silt-free water supply. Planning a pond around any but the tiniest stream is asking for a full load of silt in a few years. The silt load is in direct proportion to the size of the stream. The bigger the stream, the more silt. Where a stream is the only source of water it should be pumped into the pond, leaving the silt behind.

Flowing wells and springs are ideal although springs can cause problems during the building operation. Spring water must be pumped away from the

site to avoid letting the ground become too soggy to hold the heavy machinery.

Where streams do supply the water, the size of the pond must be decided by the size of the stream's watershed, an important consideration in guaranteeing a full pond year round. A study of the volume of water that passes through the stream in flood time determines the size of the spillway. If the flood runoff exceeds the capacity of the spillway, goodbye dam!

Although many farm ponds offer quite adequate homes for fish, there are certain features that may be built into the construction plans to encourage the healthy survival of fish. For instance, digging ponds deeper in the center pays off in drought years and also during severe winters when thick ice reduces the amount of dissolved oxygen available to the fish. Shore line depth should not be less than two or three feet, this makes it easier to keep water grasses and rushes under control. The grasses thrive in shallow water and form a breeding ground for mosquitoes. Fish cannot penetrate these areas and generally, these areas are unsuitable for fishing. There should be no trees or brush on the earthen dams or in a continuous line around the pond.

Successful maintenance of a fishing pond encompasses a great store of knowledge and a constant awareness of the changes in an individual pond's condition. However, it is easier to keep a pond healthy than to reclaim a dead one.

Some fishing experts suggest that pond owners who are not able to spend time working on their pond might do better to restock from time to time instead of attempting balanced pond management. This approach is practical only if the pond has a drain outlet for complete draining.

Dr. Robin Vannote of the Stroud Water Research Laboratory in London Grove suggests that the prospective pond builder carefully avoid proximity to any area where there is sewage disposal or a flow of chemicals or fertilizer. These products, high in phosphates and nitrates, stimulate the growth of undesirable algae. He also recommends the conventional bass and bluegill stocking for most areas of Pennsylvania. Another basic suggestion for healthy fishing include avoidance of insecticides and weed killing agents.

The removal of snow from the ice, when practical, helps to maintain an adequate supply of oxygen in cold weather. Unfortunately, when the winters are so severe that precautions fail, the fish that survive are usually of the less desirable, course varieties.*

Pond management is a matter of supplying the basic ingredients of a natural aquatic environment in man-made surroundings. The delicate balance of this environment is a fascinating study. That which nature does by instinct and centuries of repetition is not always easy for man to reproduce. Building a pond means accepting certain responsibilities for its

continued on next page

BACKYARD FISHING

continued from preceding page

health and long life, but that misty, early morning solitude, rod in hand, is worth the effort.

* Ed. Note: A rather ingenious method of keeping selected areas of a pond or lake free of ice was devised a number of years ago in northeastern Pennsylvania. Small plastic hose into which very tiny holes had been drilled was weighted and lowered to the bottom of the lake around boat docks. Compressed air from a compressor on shore (more often than not a converted refrigerator compressor was used) was released gradually until a steady stream of bubbles issued forth from tiny holes in

the tubing lying on the bottom of the lake. This constant stream of bubbles rising to the top apparently carries along a "current" of warmer water from the bottom of the lake, and since for all practical purposes, it simulates the "running water that doesn't freeze"—it *doesn't*! This has proved completely reliable in keeping a channel of "open water" around some rather expensive boat docks in areas where 24 inches of ice is not uncommon. Prior to the use of this system, ice-cutting crews had to saw channels around the docks to prevent damage (or complete destruction) by expanding ice. This system has been used successfully by commercial bait pond operators to ward off the dreaded "winter-kill" which can wipe out the smaller, shallower ponds.

Chief Enforcement Officer

HAROLD CORBIN

Retires



After a quarter century of service to the Pennsylvania Fish Commission and Pennsylvania Anglers, Harold Corbin will finally find the time to pursue his favorite pastime—fishing!

Harold began his service as "Fish Warden" for Huntingdon and Mifflin counties. Appointed April 1, 1947, he served in that capacity until named Regional Supervisor, June 1, 1951, for the South Central Region with headquarters in Huntingdon. While at Huntingdon he also handled temporary supervisory duties in the North Central Region headquarters at Lock Haven. The consolidation of the former six regional offices to the present four moved Harold to Region Four headquarters at Indiantown Gap.

Mr. Corbin had many goals—he took an adamant stand against polluters; consistently strived for better equipment and uniforms for his field personnel; initiated the first formal training program for the Special Waterways Patrolmen and prior to the formation of the H.R. Stackhouse Training School, personally trained many of the newly appointed Waterways Patrolmen. He has been serving as Chief Enforcement Officer since May 12, 1967.

Harold and his wife Mary share a common enthusiasm for the outdoors and are serious fishermen. Somehow we have the feeling we'll still see a lot of the Corbins along Pennsylvania's waterways . . . we sincerely hope so.

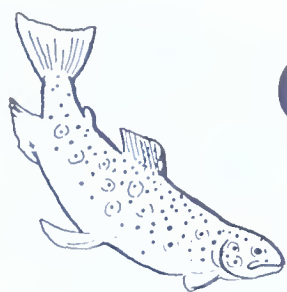
TRY A STICKWORM

continued from page 19

as I had to work almost ten minutes before I had this strike. With all this action going on it wasn't long before my buddies were moving down towards me. A secret like this is too good to keep any way and soon we were all catching fish. It still wasn't

with the regularity of the day before, but there was plenty of action to keep us interested.

If you're having one of those days on the trout stream look around, perhaps there are stickworms for you to try. We fished them in their cases and out of their cases, but it didn't seem to make any difference to the trout, they loved them any way they were served.

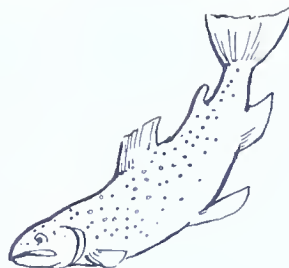


CASTING

WITH THE

CO-OPS

BY BILL PORTER



Glowing generalizations of increased interest in the cooperative nursery program filled the February *Casting with the Co-ops* page—and justifiably so. However, there is more to the growth story than added clubs, new nurseries, and increased production and stocking figures. The improvement and enlargement of existing facilities is quite a factor in the total expansion of the program. For a look at what has been going on in the last several months, here is a partial survey, region by region, of some of the activity.

Region I: The Bucktail Rod and Gun Club, Cameron County, now have a dug well as an emergency water source. They also replaced their walk-in predator cover with a more conventional horizontal wire cover. In addition the Bucktail sportsmen relocated their conversion dam, rebuilt the intake system, and poured a 4" concrete floor in their cement block raceway.

The Hi-La Sportsmen's "Pig's Ear" Nursery now has a well-ventilated aluminum storage building, erected on a concrete slab. Also considerable landscaping has been done to enhance the esthetic quality of the site.

The Farnsworth Trout Club, Warren County, have covered their four ponds with galvanized pipe framed wire. They have also added equipment to process and store venison, a positive improvement.

The North East Hunting and Fishing Club, Erie County, have covered 150' of their Twelve Mile Nursery with 1" mesh wire to reduce kingfisher problems. An additional 50'x4' railroad tie raceway has been approved and is now holding their two-year old lake run rainbows.

Region II: Bedford County's Southern Cove-Ravers Gap Sportsmen have completed a 30'x30' impoundment of a spring to be used for holding their two-year trout.

Fulton County Sportsmen's League have added an additional 50'x6' cement block addition to their original raceway. This has increased the size of their nursery operation to 100' of

cement block raceway and 90' of railroad tie raceway.

The Dunlo Rod and Gun Club, Cambria County, have changed their Otto Run Nursery #2 from a temporary one-sectioned earthen pond to 115'x6', four-sectioned cement block raceway.

And also in Cambria County, the Jackson Township Community Rod and Gun Club have completed construction of a new access road and a 50'x4' raceway.

Region III: The Jim Thorpe Sportsmen, Carbon County, have covered and secured their Mauch Chunk Creek Nursery with heavy diamond-mesh steel wire that is bolted to steel frames and locked into the nursery walls.

The Richfield Sportsmen's Club nursery in Snyder County had a conversion dam failure, resulting in a heavy fish loss. Immediate steps were taken to correct and improve the dam and replacement fish were provided by the Fish Commission.

And also in Lycoming County, improvements at the Consolidated Sportsmen of Muncy Creek's Faus Nursery have included an electric pump for an auxiliary water supply and an electric agitator to eliminate temperature and nitrogen problems that have recently developed.

Region IV: The Mercersburg Sportsmen, Franklin County, have installed a new conversion dam and intake system. This system has tripled the intake potential and permitted an 8" increase in the water depth of their 680' raceway.

Also in Franklin County, the Chambersburg Rod and Gun Club have completed an additional nursery at the Franklin County Home site. This area will be used to hold their 2-4 year old fish.

The Upper Dauphin Conservation Club, Dauphin County, have had its plans approved for a 50'x6' cement block addition to their Rattling Creek Nursery.

Improvements at the Adamstown Rod and Gun Club, Lancaster County, No. 1 Nursery include a chain-link

fence enclosure, painting walls and floor of the nursery, the addition of a cement catch basin for recirculation and a landscape project.

The Paradise Sportsmen, Lancaster County, have completed the covering of their 19'x67' nursery with galvanized-covered wagon type bows that support 1" mesh chicken wire.

The West Chester Fish and Game Club, Chester County, report success with a water bypass system through their old rearing pond to divert flood water from their new cement nursery.

The Yellow Breeches Anglers, Cumberland County, have made adjustments to their Alma Lee Thornton Nursery by dividing their two parallel 250' raceways into three sections each with wire predator covers over all fingerling trout.

The West Caln Sportsmen, Chester County, recently completed a 50'x6' cement block raceway in Hibernia Park. A unique feature of this project is a rather involved intake system, requiring 600' of 8" pipe.

The Marysville Sportsmen, Perry County, have installed an additional basket at their Bowers Run Nursery. This gives them five 8'x3'x2' baskets that, due to relocation and design, are actually five separate raceways.

The Rabbit Run Sportsmen, Schuylkill County, have completed cement work, including a floor slab for 50'x3' of cement block raceway.

The Dauphin County Anglers and Conservationists, Dauphin County, have completely rebuilt their conversion dam which washed out last April. They have also relaid their two 8" 300' intake lines below the frost level, having had some freezing problems the previous winter.

And in Cumberland County, the Mechanicsburg Sportsmen, after many attempts to find a suitable site, finally constructed a 100'x5'x14' railroad tie raceway in Trindle Springs. The nursery is unusual in that it is built directly into the stream due to the lack of grade for any other type of construction.

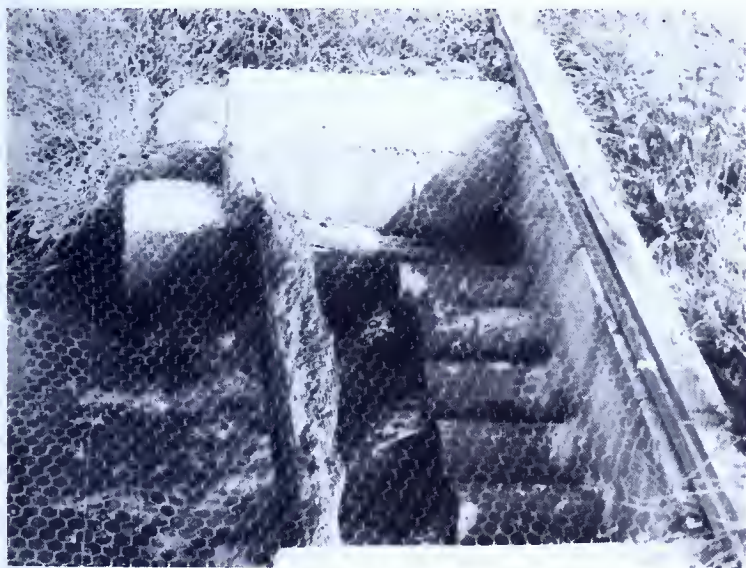
Thus, as can be seen from the spot-check summary above, considerable work is being done in the existing nurseries as well as the increase of new clubs and new raceway construction referred to in the February article. Sportsmen, contemplating improvements to their sites, might contact Bob Brown with regard to clubs mentioned above that are in their area for more detailed information in order to keep *Casting with the Co-ops* a going thing.



The flooding of Mt. Holly won't be forgotten for a long time but the fine wire installed atop these raceways saved the trout for the Mt. Holly F & G Association's nursery which was covered by a foot of water.



The Consolidated Sportsmen of Muncy Creek, Lycoming County, installed a "minnow saver" to eliminate a serious nitrogen problem that developed recently after several years of successful operation.



Delta Peach Bottom in York County solved a few problems with one device. Multiple intake pipes allow flow control and provide additional aeration. Wire is adequate kingfisher deterrent.



Chambersburg R & G Club put fingerlings into these wire baskets which are placed in raceways already carrying holdover trout. This permits double utilization of the water and there is no competition or predation.



Like most CO-OPS, Greater Ferndale Sportsmen had storage problems. They're to be envied for this fine shelter, inspected here by the Nursery Manager Bill Mountain, CO-OP Coordinator Bob Brown and Paul Byers.



CO-OPers are conscientious stockers. So many small streams seem to have lots of "natives," but chances are they're CO-OP trout from such groups as the Bald Eagle Sportsmen's Club of Blair County.



Sunday, April 9th . . . ALL ROADS LEAD TO LINESVILLE



"OPEN HOUSE" is an annual affair at the Pennsylvania Fish Commission's Linesville Fish Cultural Station—and for thousands of Pennsylvanians, the yearly trek to this modern installation is well worth the effort.

The complex is situated just south of Linesville (you can't miss it) on the sanctuary section of Pymatuning Reservoir. Pennsylvania Anglers will get an opportunity to watch actual gamefish spawning demonstrations in the hatchery.

The "Community Tank" has been drawing considerable attention over the last twelve months. Adult muskellunge, bass, carp, and panfish and other "warmwater" species cavort for thousands of visitors who view them from the top as well as through "portholes" located at different levels in this giant aquarium.

Mark that date APRIL 9 . . . get to know a little more about what goes on in an ultra-modern hatchery. We'll see you at Linesville!

ABOVE, One of the most functional warmwater facilities in the nation, Linesville surpasses all other Fish Commission installations in the production of warmwater gamefish and panfish. **LEFT**, visitors peer down into the depths of the "Community Tank" while **BELOW, LEFT**, others peep through the portholes. **BELOW, CENTER**, the muskellunge spawning activities always draw a crowd. **BELOW, RIGHT**, Fish Commission personnel are on hand to answer questions regarding any Commission activity.



BOATING

QUESTIONS and ANSWERS · by CAPT. JACK ROSS ·

From J. R. S., Pittsburgh:

"The 40-hp outboard motor on my 14-foot aluminum boat originally had an 11x13 propeller with two blades, but this allowed the engine to exceed its rated RPMs. The next heavier prop recommended for the engine is a three-blade, 10¾x15, and this one will not rev up to speed, nor will the boat plane off properly. What do I do now?"

—Your boat, like many others, seems to be just between two stock propeller sizes offered by the engine manufacturer. You have two options, one of which is to order a special wheel (probably about 11x13½ or 11x14, three-blade) from one of the propeller manufacturers, or have your present wheel repitched by a propeller shop. The very delicate propeller problem you describe also indicates that your engine must operate at absolute peak output to push the boat properly, so a slightly larger engine would also cure the trouble and leave you a bit of power in reserve.

From V. L., Jersey Shore:

"Recently I purchased a used West Bend 35-hp outboard with electric start, Model 35981. I was told this engine has a generator to charge the battery, but there doesn't seem to be anything inside the cover that looks like one. How can I tell if there is a generator, and if so, whether it is working?"

—The alternator on this engine is built inside the flywheel housing, and if the model number you give is correct, it's there. The engine has a charge indicator light, located behind the name-plate on the front of the shroud, which shines through a very small red glass between the words 'West' and 'Bend.' Check the bulb, which should be lit all the time the engine is running if the alternator is functioning properly. Also, be sure

never to operate the engine unless the battery is connected, since this will damage the alternator circuits. Parts and service for West Bend is now handled by Chrysler.

From C. T. H.,
CURWENSVILLE:

"After trying every possible propeller, I still have a severe cavitation problem on my houseboat with a single Chrysler sterndrive unit. As soon as the engine gets up to about 3000 RPM, the wheel just seems to lose its grip on the water. What can I do to correct this?"

—This is not too rare a problem on heavy hulls pushed by sterndrives. Frequently, changing the tilt of the unit or going to a wheel with a bit more or less pitch will solve the difficulty, but if not, there is one more thing you can try. Get a piece of aluminum plate 18"x12" and ¼-inch thick. Cut this into two strips six-inches wide, and bolt them under each side of the cavitation plate with the after end even with the end of the unit. Taper the forward ends in to meet the edge of the cavitation plate, and secure the plates with countersunk-head aluminum alloy

bolts, nuts on top, through holes drilled along the edge of the cavitation plate. What this does is widen the cavitation plate of the unit, preventing the wheel from sucking in air. Several of the houseboat manufacturers have been installing these plates on their boats, with generally improved results.

From G. V., Norristown:

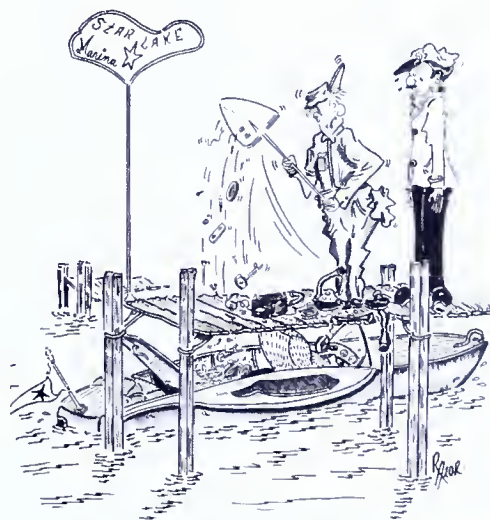
"Is it true that sailboats are now required to carry life preservers, and if so, what kind?"

—Pennsylvania Law has required approved Coast Guard lifesaving devices for each person on board sailboats for some time. For boats which do not provide adequate storage, there are a number of approved sailing vests available which can be worn without discomfort.

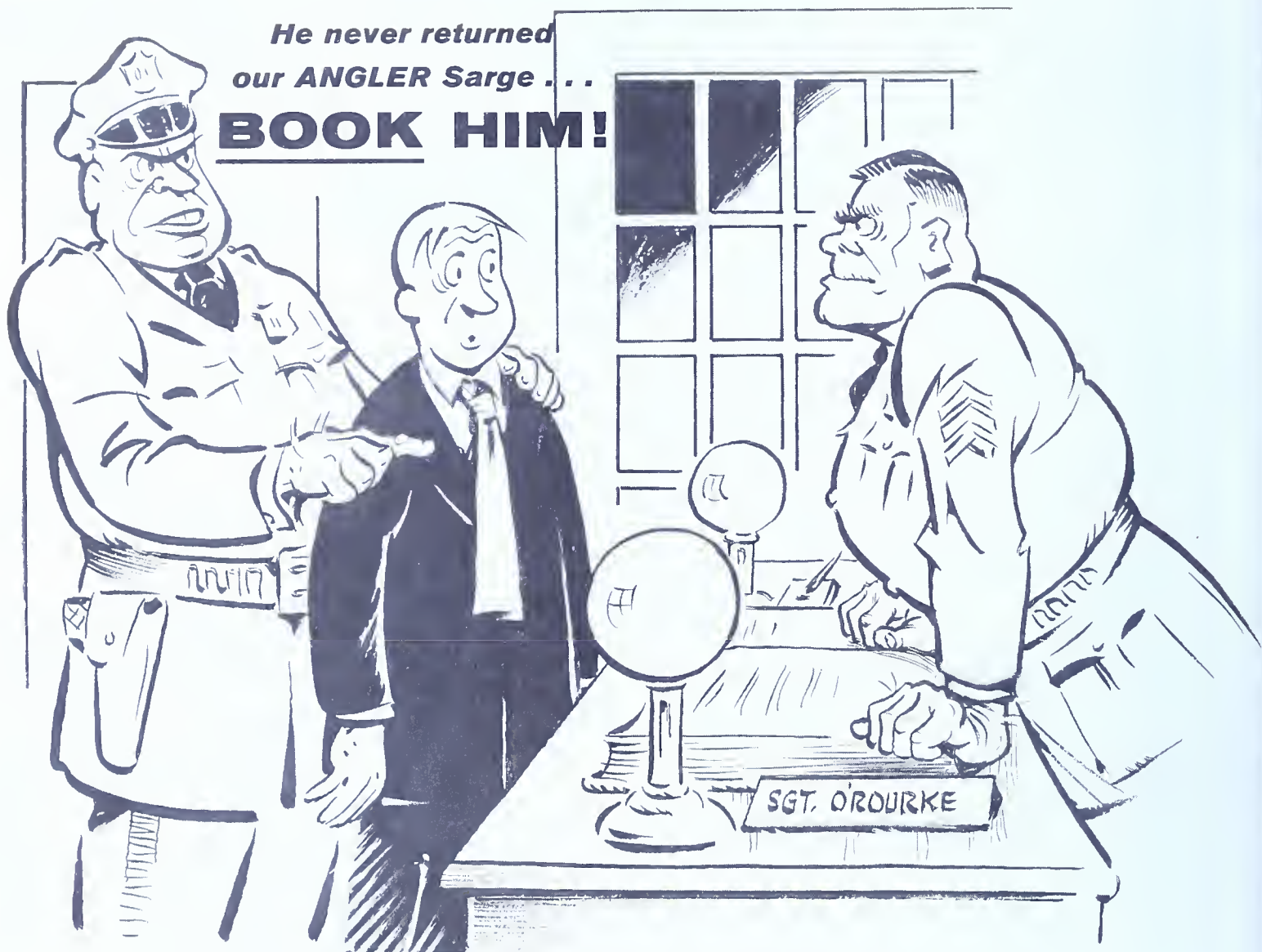
From W. J. M., Pittsburgh:

"My old displacement cruiser uses an exceptionally long shaft (nearly 12 feet) which is very vulnerable to bending if the prop so much as touches a piece of floating driftwood. Over the years, I have bought eight or ten new shafts, at considerable cost, and have quite a selection of old, bent ones. Is there any way to salvage the old shafts?"

—Repair couplings are offered by Bunting Brass & Bronze, 715 Spencer St., Toledo, Ohio 43601, which can be used to join two or more pieces of old shafting to make up a replacement of the proper length. If your problem is bending at or just aft of the strut, have a machine shop cut up one of your old shafts into six or eight short sections with the taper and thread for the propeller, and use a coupler just forward of the strut. With this arrangement, replacement of the bent end will take only a few minutes, and you may never have to buy another shaft.



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TAKING A CLOSER LOOK

by Tom Fegely

THE BROOK TROUT—

Native or Wild?

Anglers often become involved in arguments over terminology and definition when discussing fish and fishing. One topic that is bound to create a stir is the use of the word "native."

Most fishermen refer to brook trout as natives since this is the only trout species that was found in Pennsylvania waters before stocking programs began. Brown and rainbow trout were introduced from Europe and other parts of North America. Confusion arises when "native" is used to designate those trout that result from natural reproduction. Brown



The brook trout is readily identified by the square tail and white markings on the edges of the fins.

and rainbow trout, therefore, would also be "native" if they hatched in a stream.

Oftentimes the term "wild" is used to designate a stream-born fish. Stocked trout that survive several seasons become elusive and wary and often develop color patterns and pink flesh similar to those hatched in the wild. Differentiating between the two is often difficult if not impossible.

Another common misconception is the belief that only stream-born trout develop the hooked lower jaw. Actually all male trout inherit this characteristic which becomes prominent in older fish. Stream-born trout, especially brookies, develop this feature at the same age as hatchery raised fish although they may be of a much smaller size. This, in part, can help determine whether or not the brook trout you catch is indeed a "native".

Even though the brook trout is fighting a battle for survival, it is still quite common in clear, forest streams and spring-fed limestone wa-



The salmon-like feature of a hooked jaw does not necessarily mean that the fish was born in the wild. This is an inherited characteristic of all male trout.

ters. Although their normal food consists of caddisworms, mayfly and stonefly nymphs and minnows, they are seldom reluctant to hit on anything from artificials to earthworms.

Symbolically, Pennsylvania has adopted the brook trout as the state fish, his battle for survival being essentially the same as that of the whooping crane and the bald eagle. Bulldozers, pollutants, deforestation and the general advancement of civilization have all but eliminated the conditions needed by these "wild natives".

Ironically, the brookie is not really a trout Taxonomists classify him as

Wild brook trout grow at a much slower rate than their hatchery raised cousins. This brookie (middle) is older and smaller than the rainbows caught in the Aquashicola in Carbon County.



a char- differing from trout in their smaller scales, absence of black spots and fewer vomerine teeth (teeth in the middle of the roof of the mouth). Close relatives include the lake trout, Arctie char and the Dolly Varden.

If you get the chance to fish a stream with a population of native brookies, you'll find them hugging the banks beneath overhanging shrubs or near large rocks and windfalls that obstruct the normal flow of the stream. Should you pull in an orange-tinted "wild native", keep in mind that his eight or nine inch length took much longer to attain than that of an equal-sized, hatchery-raised cousin.

Behold the Woodland Piper

April is a month of change. Sounds of "pe-eep, pe-eep, pe-eep" surround the evening angler as spring's true harbinger, the spring peeper, announces his presence. Roused by the promise of warmth, choruses of these tiny tan frogs join in an eerie, pulsating chorus that can be heard more than a mile away.

More often heard than seen, the spring peeper is Pennsylvania's com-



Little more than an inch long, the spring peeper's call can be heard for more than a mile.

monest frog. Seldom growing larger than one and a quarter inches, *Hyla crucifer*, as he is known scientifically, can be readily identified by an imperfect X or cross on his back. The species name "crucifer" is a Latin word meaning "cross bearing".

April is the height of the peeper's breeding season. Dises on their toes enable these amphibious elves to cling to reeds and grasses as they join in the shrill, rhythmic announcement of another spring's arrival. In-floating their white throats into shiny bubbles they send out a regular series of peeps until the air supply is exhausted.



PENNSYLVANIA

MAY, 1972

Angler

the
Keystone State's
Official
FISHING·BOATING
Magazine...

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Man cannot think only of himself

To many people, I am afraid that conservation means no more than the efficient exploitation of natural resources to produce comfort and wealth. For over two centuries, that concept was workable because our continent was blessed with so many seemingly inexhaustible resources and the white man had only the problem of taming and using the wilderness. It was not very long ago, in fact only really one generation, that significant numbers of people woke up to the fact that there was no more frontier and that the resources were not without end.

Recently the Fish Commission testified at the fact-finding hearings in Franklin, Pennsylvania relating to the dredging permits for sand and gravel in the Allegheny River. The deposits themselves are rather unique in that these are remnants of the out-wash from the last melting glaciers some 14,000 years ago. The rock origins are from far north of Pennsylvania, many of the granites and schists originally were formed in upstate New York and in Ontario. They have particular characteristics that are highly desirable for wear surfaces in highway construction and barring another ice age, it is doubtful that they will ever be replaced. With some of the standards set by PennDOT, these deposits are invaluable for highway construction.

The Fish Commission took a stand at the hearings that dredging, as it has been done, is very damaging to the fisheries; the drop in forage fish in dredged areas is significant, and the complete food chain is broken up. The Fish Commission took its traditional posture that since the present method is damaging to the fisheries, we could not condone it. We trust that the examiners took this into consideration and that their findings will reflect our views to the greatest extent possible. There are *methods* of dredging and *locations* where this damage could be minimized.

The deluge of telegrams, letters and calls protesting our stand was almost unbelievable stating that we were *strict preservationists*, that we are advocating the closing down of businesses with *million dollar payrolls*, etc., etc.

Mankind is not an island . . . in respect to other men or to other living things, nor even in respect to the non-living or inorganic creations. Without an appreciation of our relationship to nature, without the idea of living with nature, not merely upon nature; we must sooner or later live (or perhaps die) in a world where man will have paid the penalty for doing what he cannot do successfully . . . that is, think only of *himself*.

Thoreau, while still a student at Harvard said the same thing in a different way: "This curious world which we inhabit is more wonderful than it is convenient; more beautiful than it is useful; it is more to be admired than to be used".

I would say that just as individual men cannot live successfully unless they live for something more than merely making a living, we must also regard the earth on which we live as something more than merely that which provides us with a living.

I personally believe that if we do not permit the earth to produce beauty and joy, it will not in the end produce food and fibre either.



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STATEWIDE with the EDITOR

ON THE COVER, beautiful Lake Erie, photographed on a fall day when the "heavy seas" made boat fishing virtually impossible. After some serious photography, I took a walk along its deserted shore—perhaps no more than a half mile. The walk can be best described as one through "thunderous solitude" . . . paradoxical, perhaps, but I can't remember ever being so alone amidst as much noise and action. The breakers were not unlike those of the ocean and quite often I found myself scurrying up the beach to escape getting my feet wet . . . yet enjoying every minute of it.

This particular section of Erie's shoreline wasn't much different from any other but it was a rewarding walk . . . I suppose it was the weather that made my day complete. Full sunlight, deep blue skies with fluffy white clouds . . . usually you discover that you've left the camera home on days such as this. Fortunately, this had been the reason for my trip to Erie and the faithful Pentax struck again.

It was difficult, however, to stroll along and bask wide-eyed in the beauty of my surroundings and give no thought to the stark reality of what the last fifty years of abuse have done to Lake Erie. The future? Now *that* is something else—in this respect I'm decidedly optimistic. It will be a long road back but at long last we have an awakened, enlightened society . . . laws with teeth in them (and a much more favorable climate for the rigid enforcement of these laws) and lastly, certainly most importantly, a generally cooperative attitude in industry. There are exceptions—always have been, always will be. Given time and tender care—Erie can recover.

Farther down the beach, I happened upon two men who apparently shared my enthusiasm for the day . . . each in his own way. One was a fisherman—a *real* fisherman, and we'll deal with him in short order. The first man I met was an individual who apparently liked fish but shunned conventional fishing tackle . . . well, *most* fishing tackle. He did

have a landing net and positioned himself at the mouth of one of Erie's smaller tributary streams, waiting patiently for a migrating COHO SALMON to ascend the brook! Fortunately, none of the salmon schooling offshore chose to oblige him during my stay.

The lone ANGLER was of a different school entirely. He chose to dress warmly and donned a pair of waders . . . fair weather or foul, he had come to fish and set about to do just that! At any rate, this rather verbose introduction brings us to the nitty gritty of this month's column. Too many of Pennsylvania's waterways, much of the year, resemble the Lake Erie scene on the cover—they're deserted!

Apparently there are two distinct types of fishermen; Type 1—those who will use any reason, excuse, or justification whatever to GO FISHING; and, Type 2—those who use a similar assortment of excuses for not fishing! And yet, this latter group is comprised of LICENSED FISHERMEN! They were all out on the opening day of trout season, many of them will take the tackle along again on the 4th of July picnic, and a few will scurry into the hills for one last crack at trout fishing over the Labor Day weekend—but that's it!

Mild Januarys find our open rivers devoid of fishermen STATEWIDE, while a handful of smart, hardy diehards smile all the way to the weighing platform . . . bow-legged under the burden of muskellunge that a decade or two ago were trophies of the far north alone. True, sections of Pennsylvania have always had the musky, but never have they been as abundant and within easy driving distance of EVERY PENNSYLVANIAN! Fish tale? No, our mail here at the ANGLER office, much of which contains photographic proof, verifies this!

FEBRUARY and FREEZE-UP are synonymous and *ice fishing* leaves many people cold. Modern fabrics, quilted with the "*poly-this's*" and "*poly-that's*," can keep you as warm as toast and I've never been bothered with mosquitoes or gnats while ice

fishing! Next winter, "*Try It—You'll Like It!*"

The handful of sucker fishermen I noted along the Susquehanna's shore last MARCH confirms my contention that few of our million or more ANGLERS have ever tried the lazy-day enjoyment available on a sunny spring day. You'll find tranquillity unavailable in pill form.

We can't build a case against anyone in APRIL—everyone makes the scene—at least on the first two weekends. But MAY, the weather's warmer, the streams have generally returned to nearly normal levels, water temperatures have begun to climb to levels that signal open season on forage amongst the fishes, but by mid May more than half of "Type 2" have stashed away their tackle! With the exception of the crowds that gather during the "In-Season" trout stockings, the trout fishermen can pick and choose the degree of solitude he seeks on most any trout stream!

By the end of MAY, every fish except Bass are in season, but the fish outnumber the fishermen who knows how-many-to-1. And from the time you've received this issue—to the BASS opener JUNE 17th, Pennsylvania's ROCK BASS will be feeding like there's no tomorrow, and yet there are few takers! ANGLER readers are undoubtedly in "Type 1"—why not search out a "Type 2" and take him along next time out?

What can we say about JULY and AUGUST? We'll admit that they hardly qualify for first place in any BEST MONTH TO FISH contest, but we're going to have some suggestions for our readers in the JULY and AUGUST ANGLER issues—some you've tried, but I'll say *this* much now, some are *different*.

"Type 2's" simply have no argument against fishing during SEPTEMBER, OCTOBER, NOVEMBER, and DECEMBER! September and October herald the return of the cohos at Lake Erie—that's big news in itself, but if our EASTERNERS don't care for the long drive, what's wrong with the DELAWARE RIVER along our eastern boundary for bass and walleyes? Lake Wallenpaupack for the same, plus the most fantastic lunger brown trout fishing in Pennsylvania—plus most other gamefish? The SUSQUEHANNA RIVER for everything that swims—save trout? The JUNIATA RIVER with its abundance of muskellunge, smallmouth and easy access? There's just no excuse for not going fishing—ANYTIME!



WE TOLD YOU SO!

A few months back my husband and I were very skeptical about an article that appeared in your magazine. It was about bass fishing in the Allegheny River above Pittsburgh. We thought it a big joke as we have lived in Pittsburgh all our lives and are "died in the wool" fishermen and a bass in a river above Pittsburgh was unheard of.

Well, the enclosed picture is of two bass we caught in the shadow of the Hulton Bridge above the Oakmont Boat Club. One was 14 inches (which I caught) my husband caught the smaller one which was 12 inches. Thought you'd like to see them and maybe erase doubts in others minds.

We were sure glad you were right and we were wrong. Thank you.

Mrs. H. L. ITTEL, Pittsburgh

Thank "you" Mrs. Ittel—we're glad to hear The Angler has made you aware of this tremendous fishing potential so "close to home."
Ed.

ATTENTION PHYCOLOGISTS!

I am interested in the study of Phycology; the taxonomy of freshwater algae.

Through the microscopic study of algae from two lakes in the Hanover area I was able to identify and classify 216 genus and species of Algae. I make colored pencil drawings on 5 x 8 index cards of each specimen I find. My findings came from Lake Marburg, (Codus Creek State Park), south-east of Hanover and from Glatco Lodge in the Pigeon Hills north of Hanover. Yes, even from storm drains and a tree in my back yard. Algae can be found anywhere there is moisture. I would be glad to correspond with anyone with the same interest, either professional or amateur.

I have been a subscriber and fan of the Pennsylvania Angler magazine at least 10 years. I am all for a variety of subjects to read about other than fishing. There is a very

close or interwoven relationship with boating, wildlife, nature study, safety regulations, etc., that makes our Pennsylvania waterways the best in the country. I just wish people would have more self respect and respect for our natural resources, (which are NOT unlimited). This is one instance where we can get something for nothing just by not littering and obeying a few simple laws.

If I can be of any further service be sure to write and ask. Thanks for a truly entertaining publication.

ROBERT L. FROCK, 113 Fulton St.,
Hanover, Pa. 17331

Thanks Bob—"to each his own" but more power to you. Perhaps when all of these "interrelationships" are more fully understood our society will begin to pick up the pieces and really "put it altogether!" **OUR READERS SHOULD CORRESPOND DIRECTLY WITH MR. FROCK.**
Ed.

"MOUSE" FOR DESSERT?

Enclosed you will find a check for \$5.00 for a subscription to the Pennsylvania Angler.

I have been reading "second-hand" long enough. Not only do I miss copies but I feel I should contribute something to a fine magazine. In my opinion our Fish Commission is doing a fine job in its stocking program and in its "Fish for Fun" and "Fly Fishing Only" efforts. We have a fine fly stretch within a twenty-minute drive of our town and the only criticism I have heard is from "bait-only" fishermen. They feel there should be "Bait-Only" fishing stretches.

I caught a fifteen inch brown trout in June 1971. It was a heavy-bodied trout and its stomach was exceptionally large. The reason for the "beer-belly" was a large field-mouse the trout swallowed "rear-end" first and partially digested. I have been fishing flies for trout for 37 years (mostly-dry) and this is the first I have found a mouse in a trout's stomach. None of my trout-fishing friends had heard of it either. (Incidentally, the trout was taken on a green cork-bug tied on a #14 dry fly hook). I caught more trout on this bug last year than I did on the conventional dry fly patterns.

R. D. BUCK, Watsontown

After seeing the mouse, didn't you feel a bit awkward using #14 hooks? This isn't the first instance of trout taking a mouse—although we'll admit it is unusual!
Ed.

BUTTONS VS. NO BUTTONS

My son Albert Filaseta has been getting the Pennsylvania Angler for some years now and we both enjoy reading it.

Why did the state do away with the fishing badge license? Years ago these badges had a small metal pocket in the back where you could fold your written license paper and insert it in the back of the metal badge. I'm sure most anglers in Pennsylvania would welcome the badge back—also waterways patrolmen, due to the fact that they would have no problem making out the badge at some distance—I'm willing to pay 10¢ or 15¢ extra for a badge if the state is going to cry cost. As it is now, these paper licenses are strictly a nuisance, I'm sure most readers will agree with me.

ARTHUR FILASETA, Bethlehem

Those little license buttons sure were pretty Art, but convenient? Never! For one thing, they sunk if dropped in the water—and quickly. Although they were discontinued originally as an economy measure, they were abused by a minority of our populace and, contrary to your comment that the Waterways Patrolmen would have no "problem making out the badge at some distance," it was our "duty" in those days to determine that the license "buyer" and the "wearer of the button" were one and the same person. Many violators depended on an officer's reluctance to extract and unfold the certificate (especially in cold weather when his fingers were numb!) and borrowed a license to go fishing—rather than buy one! I remember an instance when a father fished with the button (he claimed he had forgotten to put the certificate in the back!) and his son fished with the certificate—by golly, he left the button on his other hat! A day of reckoning was bound to come—it did. No Art, they weren't quite as convenient as you might think.
Ed.

"WARRIOR" JIG

In your November 1971 issue—article "Tailrace Trophies," by Don Neal—he refers to a "Little Kinzua Warrior Jig" for catching trout. Is it possible to purchase this jig or what might it look like? A self-addressed envelope is enclosed for an answer. Also—congratulations on a very fine magazine.

HAROLD B. WEBER, Shippack, Pa.

Glad you enjoyed Don Neal's article. We are sending your request directly to Don. Our thanks for your kind remarks.
Ed.



FISHING OUTLOOK

By-- Stan Paulakovich

Looking for a place to do some Trout fishing in May that offers easy access, big waters, good insect hatches and nice fish? Try this one . . . the Lackawaxen River in Pike county. Like any other public fishing water you're not going to throw in and catch fish every cast. Nope, you'll have to work for each and every fish you take. You won't catch all whoppers either. Most of the fish will be nice deep, chunky, 10 to 13 inch scrappers. You'll get some heart throbbers in the 14 to 18 inch class and every once in a while you will tie into a Trout that strips off the line, tears the leader and flies off, then jumps into the air shakes his head goodbye and leaves you shivering in your boots.

The Lucky is not all milk and honey though. It's got some adversities and these will be discussed later. Heading in the mountains of Wayne County near Belmont Lake, the Lackawaxen courses down through the valley towards Honesdale where it is joined by the Dyberry, another noted Trout stream. Now of fair size, it averages 40 feet or so in width. From Honesdale to Hawley, a distance of 9 miles, most of the land along the stream is posted and isn't stocked. At Hawley, Middle Creek empties in and from here to its confluence with the Delaware River 16 miles away, is the area on which we will concentrate.

Rte. 590 crosses Rte. 6 in Hawley and you head east on Rte. 590 to reach the mid portion of the stream. About 2 miles out of town, Legislative Rte. 51018 bears right towards the town of Kimbles and parallels the river for about 10 miles. At the town of Rowlands you again hit Rte. 590 and this goes right down along the river till it runs into the Delaware at the famed "Zane Grey pool."

What about the size of the stream? The Lucky has sections that are over 200 feet across, but about 100 feet is average. Some of the pools may be 15 feet deep, but you can usually expect 6 or 7 feet in the pools and 2 to 3 feet as average depth. The river has plenty of drop from Hawley to the Delaware and the water is fairly fast with a good one

to one, pool and riffle ratio. An extremely fertile stream, the bottom is slipperier than eel skin and felt soles or chains and a wading staff are recommended. Numerous tributary streams swell the size and the speed of the Lackawaxen as it approaches the Delaware.

If you fish the Lackawaxen, you're going to run into a peculiar situation, so let's get this straightened out before we go any further. Back in 1925 Pennsylvania Power and Light Co. built huge Wallenpaupak Lake to act as a storage basin for their hydro electric generating plant. The water impounded therein is carried from the lake through a 14 foot diameter pipe to the plant, 3½ miles away. Here it is used for generating power and then is discharged into the Lackawaxen near Kimbles. This plant is



automatically controlled from the company's systems operating headquarters, 75 miles away. The plant is unattended and is used basically for back-up or peak generating rather than for full time—or even night time use. E. T. Wilson, P.P.L.'s coordinator of Public recreation said in 1971 *"During the first few weekends of the annual Trout season we make every effort to avoid use of the plant."* Occasionally this policy must be scrapped because of the high spring flow of water into the lake. Under these circumstances it may be necessary to release water to protect the structural integrity of the dam and the dike. Hopefully such circumstances will be infrequent if at all."

Pennsylvania Power and Light which has over the years done such a tremendous job in making available their lands and waters to fishermen and boaters indicate again in

1972 that every effort will be made on their part to limit or to curtail discharges into the Lackawaxen on weekends of the early Trout season unless it is absolutely necessary.

How does this affect fishing? During the periods of discharge the level of the Lucky raises between 2 and 3 feet. It doesn't do this all at once, but rather gradually—taking about 30 minutes to reach its peak. Signs prominently displayed all along the river state, **CAUTION—RIVER LEVEL CHANGES RAPIDLY.** All it takes is a little common sense to get out of the water when you notice the level rising. A sound warning system is not practical because of the length of the affected area and certainly the many landowners along the river would not appreciate the invasion into their privacy by the noise.

The Lackawaxen because of these discharges does not suffer from over-fishing. Water temperatures during the entire trout season stay at a comfortably cool 56 to 60 degrees. This is ideal for Trout and it is evident that it is optimum for aquatic insect life by the tremendous populations of Mayflies, Stoneflies and Caddisflies that are in its waters.

Where's a good place to fish the Lucky? Anywhere! There are probably a hundred riffles and as many pools in this stretch and every one of them have Trout in them. Over the years the "regulars" have picked their favorite holes and fish them until they get to know them like the back of their hands. Some of these pools and holes have acquired names over the years and these are generally because of their location. Coming up from the bottom some favorites are "Lards Creek Pool," "the Cinder Pile Pool," "Rowlands Bridge Pool," "Glen Eyre Pool," "Millionaires Pool," "Swinging Bridge Pool," "Highwater Pool," "Blue Pool" and the "Kimbles Pool." If you're a stranger driving along the river and see a stretch that looks good . . . stop and fish it—you'll have picked a good one, no matter where you are!

How do you fish the Lucky? If you're a bait or lure fisherman with a

continued on page 28



MUSKY FEVER

by George S. Morrison

*"I'm hooked, I admit it! I am completely
totally, hopelessly taken with MUSKY fishing!"*

For quite some time I wondered just what the appeal of fishing was for those who spent all of their time chasing muskys. Many times I had watched the boats trolling around the lake at what seemed a slow crawl! How could those fellows spend their time like that when there were plenty of bass, crappies, and other panfish to provide the angler with all the excitement he needed? How boring it seemed to be. There couldn't possibly be any fun to it. It really looked like a waste of time. *My mistake* was wasting all those years *not* fishing for muskellunge.

It all started when we bought a boat! My original intention was to buy a small fiberglass fishing boat with a six-horse-power engine, something my son and I could use to get to the bass hot spots. Edinboro Lake was at one time made larger and there are plenty of submerged stumps, particularly around the edges. A small boat would be easier to navigate around these below-water obstacles. But, with two teenage daughters who were anxious to experience the thrill of waterskiing, our family compromised with a boat that the "girls" could use for waterskiing, but at the same time, would enable the "boys" to fish.

I soon discovered that the "compromise" was weighted in favor of the waterskiers! Have you ever navigated a fifteen foot open hull boat with a fifty horsepower engine into bass hotspots? More often than not, it's impossible! So, one day we decided to troll for musky. As beginners luck would have it, we got a strike on our first attempt. What an experience! The rod almost bent in half, and line screeched off the reel. I set the hooks with a mighty pull as I had been previously instructed to do. The rod jumped back and forth with vibrating jerks as the musky tried to free itself. What followed was confusion, excitement, and spectacular leaps and elation as we boated our first musky. With pounding hearts we took out the measuring tape and stretched it out along the musky. Impossible! The tape must be wrong—try again. Were our eyes deceiving us? Twenty-eight inches? It couldn't be . . . it was! I never thought I would throw a fish that size back! With the legal limit at 30 inches, there was nothing to do but throw it back. How we hated to do it! From that moment on I have had musky fever and if anything, it has gotten worse. Nothing seems to help

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A PROMISE IS A PROMISE!



by George E. Dolnack, Jr.



The author displays a string of Walleyes caught on one of his fishing sorties. Where did he catch them? What did he use? He promised not to tell if we didn't, and after all—a promise is a promise!

My friend Howie is a whale of a good fisherman and his honesty, like all fishermen, is impeccable. Come to think of it, his honesty is only exceeded by his naivete when it comes to believing what other fishermen tell him . . . but, he's learning.

One particular season we were having a run of good luck with the walleyes. We were consistently successful with jigs of almost any black/yellow combination.

One evening after work, we were out in Howie's sixteen footer drifting around trying to pick up a few of these pie-eyed delicacies with our quarter ounce lead-heads. But as luck would have it, the walleyes, except for a stray that was on our stringer, turned their noses up at our jigs.

As a matter of fact, we threw just about everything we had in our tackle boxes at them. At one point, even throwing the tackle box itself seemed like a good idea.

We were using our usual productive method that wasn't working so hot. We'd drift until we hit a fish, drop the anchor and then work the area over for fifteen minutes or so in hopes that we'd found a school. If we had no further strikes then it was up with the anchor and drift some more. Likewise, if we connected with a walleye during that time, then we'd stay in that spot for another fifteen minutes from the time we scored and repeat the process until we caught a stringer full or lost our patience.

We'd also fish a Dixie spinner, spiked with a large nightcrawler, from a rod that was set in a rod holder

clamped to the transom. This rig always managed to pick up a fish or two . . . but not this time.

At anchor, and fishing the same area as we were on this evening, was another boat with a pair of fishermen in it. Activity on the boat was conspicuous by the dip net going in and out of the water.

Howie had a look with his field glasses and saw that the two anglers were very jovial and that they had a stringer over the side of the boat. He nodded towards them and said, "Looks like they got a stringer-full. Wonder what they're using?"

"Whatever it is," I replied, "I wish we had it."

We kept on fishing, pushed by a gentle breeze, towards the other boat.

Finally, Howie said, "Why don't we ask them what they're using."

"Think they'll tell you?" I replied.

He removed his lure from the snap swivel and put on a different one. "Why shouldn't they?" he asked.

"Would you tell a stranger what you were using if you were hauling 'em in?" I retorted.

"Sure," he said.

I shrugged my shoulders and pulled the line up sharply to clear it of some floating algae. That was Howie alright I thought . . . the *straight shooter*.

By now our boat had drifted closer to the other one and Howie could contain himself no longer, so he struck up a passing conversation with them. Eventually he got around to popping the question and asked, "What are you guys using?"

"A small red and white spoon," replied the big man wearing a blue cap.

"Maybe we'll give it a try," said Howie, "and thanks."

During this brief encounter I thought it strange that neither fisherman pulled their lure out of the water, if indeed they were using a "red and white spoon."

I mentioned this to Howie after he had started the motor and swung the boat around to get into position for another drift over the spot that we'd just fished.

"Aw," he said, "they were just using a slow retrieve and bouncing the lure over the bottom."

"Baloney, I was using the same lure before," I said. "You probably didn't have the right combination," he needles.

I dug down into my tackle box, pulled out the red and white spoon, handed it to him and said, "O.K., let's see how a real pro does it."

For the next half hour, as the water lapped gently against the boat, he flailed the lure in all directions, trying every conceivable retrieve without producing a strike.

The other boat had departed and as darkness started to steal away the remaining light, Howie said, "Maybe you're right. Let's go."

Once back at the launching ramp, we trailered the boat, stowed and secured the loose gear and left.

A short distance down the road, we made our usual stop for refreshments and to swap hardluck tales with the other fishermen.

The dimly lit place was nearly empty. Two men sat at one end of the scarred and cigarette burned mahogany bar. One was snarfing down a pickled egg while the other banged his ear about the merits of open faced spinning reels over those with a closed face.

It was such an intelligent discussion that we took a seat at the other end of the bar where two brews awaited their owners.

After ordering up we made fishing talk with the balding, rotund bartender. He pointed to the two drinks and said, "Those guys limited out."

I looked at Howie and he looked at me. We were both thinking about the same thing and then two fishermen ambled in from a backroom and confirmed our thoughts.

We exchanged notes with them and finally the big guy with the blue cap and deep lined, ruddy complexioned face said, "Weren't you two in that red and white boat with the yellow pennant?"

"Yeh," said Howie, "that was us."

The big guy moved a little closer and said, "You know, my buddy and I feel bad."

"Why?" I said.

"Well," he stammered, somewhat embarrassed, "we lied to you out there." And he swept his hand toward the lake.

His friend with the cherub face smiled awkwardly, ground out his cigarette in a metal ashtray and motioned the bartender for another round.

"We weren't using what we said we were," he confided.

At that point I gave Howie an I-told-you-so kick in the shins and pushed a couple of dollars toward the bartender.

"And," the big guy continued, "if you *promise* to keep it under your hat we'll let you in on the secret."

We both vowed, *fisherman's honor*, that it wouldn't get any further than us.

Leaning over still closer and looking around to make sure no one else was in earshot, he whispered the secret from the corner of his mouth. "Sonar, perch color."

Well, that was simple enough I thought. So we sprung for another round and then got the lowdown on how to use this walleye killer.

We departed two new friends richer and had a lead on a hot lure—we hoped. Or were those two birds just talking for the treat?

The next day during our lunch hour, we hopped over to the local fishing tackle store and asked for a couple of the lures.

"Didn't you buy one yesterday?" asked the proprietor.

Not until we assured him that we hadn't, did he reach under the counter and produce two of the perch-colored, fish-shaped lures.

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Bob Hager, of Custards Road, added a thirty inch Northern Pike to a nice string of Walleyes—all taken with artificial lures. He caught them over a two day span while fishing in French Creek near Cochranon.

Meadville Tribune Photo by Edward T. Gray



A REPORT ON FISCAL YEAR '70-71...

PROGRESS

EXECUTIVE OFFICE

The executive director coordinated all activities and programs of the Commission and served as direct liaison between the staff and personnel to the members of the Commission.

During this fiscal year, the Commission met in formal sessions on July 27, October 19, January 4, and May 3. Commission members voted to modify and change basic policies of the Commission, including policies on wired areas, "Fly-Fishing-Only" areas, "Fish-for-Fun" Projects, and numerous other operating programs.

Highlighting actions taken by the Executive Office, with the approval of the Commission, was a reorganization plan adopted in January. This plan created three new bureaus—Waterways, Administrative Services, and Fisheries and Engineering. The new organizational structure was designed to better serve

the fishing and boating public by better coordinating programs and personnel assigned to these functions.

The Executive Director represented the Commission at numerous meetings throughout the year, spent considerable time in planning and negotiating for the installation of fish passage facilities at Conowingo Dam on the lower Susquehanna River, undertook a detailed study of the environmental impact of the proposed Tocks Island Dam on the Delaware River, and attended many public hearings or meetings concerned with the Commonwealth's programs for clean waters, sound fishery management and protection, and expanding facilities for safe boating on our lakes, rivers and streams. On September 25, 1970, former Executive Director, Robert J. Bielo, who served throughout this fiscal year was recognized and honored by the Pennsylvania Federation of Sportsman's Clubs as the "Man of the Year."



The Pennsylvania Fish Commission is vitally concerned with the protection of the Commonwealth's waterways and the Executive Director coordinates all of its activities and programs, serving as direct liaison between the staff and field personnel to the members of the Commission.

BUREAU OF ADMINISTRATIVE SERVICES

The main functions of the Bureau of Administrative Services are policy recommendations, personnel and payroll, purchasing and procurement, planning, budgeting and financial programming, issuance of special licenses and permits, review of applications for mine drainage, liaison between other state and federal agencies, legislative review and reporting, retirement counseling, inventory control, warehousing, and numerous other incidental functions required in the day to day operations of the Commission.

The personnel section of the program acts as a liaison between the operating programs, Office of Administration and the Civil Service Commission. Presently there are 240 employees covered by the State Civil Service program. The total salary complement is now 391.

The following licenses and permits were reviewed and issued:

Regulated Fishing Lake	274
Artificial Propagation	203
Live Bait Dealer	344
Transportation	78
Net Permit	240
Scientific Collector	72

The following applications were reviewed and acted upon in conjunction with other Commonwealth Agencies:

Drawdown	171
Dynamite	19
Mine Drainage	415

The section on Federal Aid Coordination prepared and presented a total of 10 projects for funding under various federal programs. The total estimated cost of these projects was \$378,197. The Fish Commission was reimbursed in the amount of \$222,647.75. The following is a breakdown of the funds involved:

FUND		
ANADROMOUS FISH FUND		
Name of Project	Total Cost	Reimbursement
Coho AFS-3	\$ 36,000.00	\$ 18,000.00
Coho AFS-5	49,000.00	24,500.00
Brandywine Shad	15,000.00	9,000.00
	\$ 90,000.00	\$ 41,500.00
FISH AND WILDLIFE RESTORATION (D-J)		
Whirling Disease	\$ 15,050.00	\$ 11,287.50
DDT Research	12,000.00	9,000.00
D-J Maintenance	72,000.00	54,000.00
Susquehanna Access	49,147.00	36,860.25
	\$148,197.00	\$111,147.75



Officer Shabbick, Wyoming County, is far removed from Commission headquarters in Harrisburg, but all matters pertaining to his payroll, retirement, uniforms and equipment are processed by the Bureau of Administrative Services.

FEDERAL LAND AND WATER CONSERVATION (BOR)

Tarentum Access	\$ 40,000.00	\$ 20,000.00
Mill Creek Dam		
Clarion & Venango Acquisition	100,000.00	50,000.00
	\$140,000.00	\$ 70,000.00

On July 31, 1970, Act 225 was signed by former Governor Raymond Shafer granting to the Pennsylvania Fish Commission royalties on sand, gravel and other minerals extracted from the waters of the Commonwealth. The Fish Commission received during this fiscal year \$137,112 from the dredging companies holding permits issued by the Department of Environmental Resources.

REAL ESTATE DIVISION

Our suburbs extending into the countryside are swallowing up thousands of acres of land annually. Increased development such as apartment houses, housing developments, single family dwellings, commercialization, industry and outdoor minded individuals, not only are forcing the price of land higher each year, but in many areas are rapidly depleting the availability of water front properties.

Many acres and miles of waterways infrequently used are being made available to the fishing and boating public through the Fish Commission's Lease Agreement Program with numerous industries, municipalities, water authorities and state and federal authorities controlling large tracts of land along the major water areas.

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REAL ESTATE DIVISION

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Some of the major acquisitions completed or worked upon during this period include:

Lakes and Dams Acquired

Mill Creek, Clarion and Venango Counties
Mill Creek, Lycoming County

Access Areas Acquired

Quaker Lake, Additional Land, Susquehanna County
Mahantango Access, Susquehanna River, Snyder County

Streams Acquired

Kettle Creek, Potter County
Neshannock Creek, Additional Land, Lawrence County

Hatcheries (Additional Land) Acquired

Walnut Creek, Erie County
Huntsdale, Cumberland County

P.L. 566 Projects Under Various Stages of Acquisition

Dunlap Creek, Fayette County
Dunlap Creek, Washington County
Greenlick (Jacobs Creek), Fayette County

Additional Land at Hatcheries Under Acquisition

Corry Hatchery, Erie County
Union City Hatchery, Erie County

Access Areas Under Various Stages of Acquisition

Susquehanna River Access (Linden), Lycoming County
Goldsboro Access, Susquehanna River, York County
Zane Grey Inn, Delaware River, Pike County

Leases

The following leases were instituted or renewed during this period:

Continued four leases for Coho nursery waters, Erie County; instituted Kimmets Lock lease (near Allentown) to provide public fishing and boating to Lehigh River, Lehigh County; instituted new lease for Laceyville Access, Susquehanna River, Wyoming County; revised lease with Penn Central Railroad at Saginaw Access, Susquehanna River, York County; instituted new lease with Boy Scouts of America for Memorial Lake, Monroe County. Other leases included Boy Scouts of America at Neshannock Creek, Lawrence County; lease with Columbus Township Supervisors of Warren County; water rights agreement, Pleasant Gap Fish Hatchery, Centre County.

In addition, more than 73 potential access sites on eight major rivers were investigated as well as three municipal water supply reservoirs.



Gaining access to prime fishing and boating waters, such as the Susquehanna River pictured here at the Montgomery Ferry Access Site, is the responsibility of the Real Estate Division.

BUREAU OF ENGINEERING & FISHERIES DIVISION OF ENGINEERING

The Division of Engineering is responsible for the engineering and technical know-how to carry out construction, maintenance, and other projects de-

veloping Commonwealth waters for fishing and boating recreation. The range of tasks undertaken toward that goal call for the collective skills of its engineers, architects, surveyors, draftsmen, and other technical personnel. The Division is also assuming increased responsibility in the Commission's part of the battle to protect Pennsylvania's water resources from intrusion and pollution.

Summing up the accomplishments for the fiscal year ending June 30, 1971, the Engineering Division: investigated thirty-six sites to determine their feasibility for acquisition for future access area, dam, or hatchery development; investigated four streams to determine feasibility for acquisition for public fishing; made twelve property and twenty-four topographical surveys; and, prepared designs and specifications for fifty-seven projects, large and small, including seventeen sets of property plans.

The development of four new lakes—Hemlock, Hunters, Leaser, and Minsi, was completed while that of a fifth, on Mill Creek in Lycoming County, was begun. The development of the Visitor's Center and Administration Buildings at the Huntsdale and Pleasant Gap Hatcheries were completed. Continuing through the year was the development of the new Big Spring Hatchery, the major renovation of the Pleasant Gap Hatchery, the development of the jetty system at Walnut Creek, and the complete renovation of the Linesville Hatchery. Also, at Linesville, two silo systems were under installation for warm and cold water fish production research. Extensive improvements were undertaken at four hatcheries to roadways, parking lots, electric, and water systems.

Four new access areas—Amity Hall, Levittown Lake, Montgomery Ferry, and Lake Wallenpaupack were built, and work on three more has begun. Major improvements to roadways and parking lots were completed at five other existing access sites.



The development of the Walnut Creek jetty on Lake Erie provides an additional accommodation—shore fishermen are permitted to use the "pier" during the Coho Salmon run.

The year saw the establishment of a special branch within the division to handle certain phases of the Commission's stream improvement and protection program. The new branch furnished and supervised the installation of gabions, on nine streams, reviewed 1,519 sets of highway plans, reviewed 218 DER Permits, and held 111 field reviews and meetings in performing its vigil for encroachments on aquatic environments.

The Division was responsible for the routine maintenance of all Commission properties including fifty-one impoundments, one hundred fifty-six access areas, four regional offices, sixteen improved streams, six Coho Salmon nursery facilities. Additionally, the Division performed maintenance tasks at the eleven fish cultural stations and four propagation lakes.



The massive boulders used in the construction of the jetty prevent Lake Erie's surf from closing the channel. Boaters can now count on leaving (or returning to) the Walnut Creek access ramps in relatively calm waters with little fear of running aground.

DIVISION OF FISHERIES

Division biologists were involved in several long-term major research projects including a cooperative program of studies of anadromous fish in the Delaware River, studies of whirling disease of trout, restoration of shad to the Brandywine, studies of water quality and fish populations in the Pennsylvania waters of Lake Erie, a survey of fish stocks and habitat in the Allegheny River from Kinzua Dam to Franklin, a study of the feasibility of culturing various species of fish in vertical units, a detailed analysis of the composition of hatchery effluents and their impact on receiving streams, and a survey of wilderness trout streams across the state. The Lake Erie coho project which was formerly regarded as a research project has proven so successful it has been given the status of a regular Commission program.

The Division of Fisheries has had its organizational format changed to improve efficiency and communication. The Division is now organized by sections, each section with a chief and staff. Present sections include Management, Research, Coldwater Propagation and Warmwater Propagation. Other activities included in the new format are an Administrative Branch, a Stocking Manager and a Cooperative Nursery Branch.

Biologists at the Benner Spring Fish Research Station were involved in field investigations, educational activities and advisory services. Personnel from the Division have attended various organized seminars, workshops, professional society meetings and training courses including the meeting of the Northeast Division of the American Fisheries Society, the Northeast States' Warmwater Fisheries Workshop, Midwest Benthological Conference, the Interstate Muskellunge Culture Workshop, the Pennsylvania Academy of Science, Aquatic Biologists Seminar and a Fish Kill Investigation Seminar.

The field staff conducted 22 lake surveys, 146 stream surveys including pollution and fish kill investigations and reviewed over 160 aquatic herbicide applications. Two members of the staff served as co-authors of a manual on "Aquatic Weeds, Their Identification and Control in Pennsylvania."

Pathologists at Benner Spring have conducted 100

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DIVISION OF FISHERIES

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routine investigations of Pennsylvania Fish Commission hatcheries and have recommended appropriate therapeutic treatment where required.

The Cooperative Nursery Branch continued to expand with 90 organized sportsmen's groups sponsoring 116 nurseries located in 44 counties of the state. Trout released during the 1970-71 period passed the 600,000 mark—an increase of 120,000 over the past year.

Trout and warmwater propagation sections had an excellent year with outstanding success in both areas.

FEDERAL-STATE COOPERATIVE STOCKING PROGRAM

1970-71 FISCAL YEAR

Cold Water Fisheries

Number of trout streams stocked	888
Miles of trout streams stocked	4,817
Acres of trout streams stocked	18,731
Number of lakes stocked with trout	89
Number of lakes stocked with trout (Experimental)	3
Acres of lakes stocked with trout	10,372
Acres of lakes stocked with trout (Experimental)	4,690

Total acreage 33,793

Number of cold water fish (trout and salmon) stocked:

Fingerling	2,340,469
Adult	3,487,796

Total 5,828,265

Warmwater Fisheries

Miles of warmwater streams	2,336
Miles of warmwater rivers	1,665
Number of warmwater ponds and lakes	333
Acres of warmwater ponds and lakes	83,512
Acres of Lake Erie in Pennsylvania	640,525

Total acreage 724,037



Cooperative Nursery Branch Chief Bob Brown, extreme right, with Waterways Patrolmen Bryce Carnell and Warren W. Singer, Jr. checks new nursery site with officials of the Knouse Food Cooperative, Inc., on whose property the proposed site is located. During the fiscal period, 90 organized sportsmen's groups sponsored 116 nurseries in 44 counties of the state.

Number of warmwater fish stocked:

Fry	28,387,900
Fingerling	649,187
Adult	85,312
Total	29,122,399
GRAND TOTAL OF ALL FISH STOCKED	34,950,664

OFFICE OF INFORMATION

As the name infers, this office, created under a reorganization plan adopted by the Commission during this fiscal year, serves to keep the public fully informed about fishing and boating opportunities in Pennsylvania, as well as Commission programs and activities to manage the resources upon which these recreational sports are based. Working largely through the news media, the Office of Information issued 75 news releases during the year and, in addition, prepared and distributed periodic reports on fishing conditions throughout the winter season and the trout season. As a special service, the Office also taped weekly fishing reports for broadcast by several radio stations in the central Pennsylvania area.

Information kits were prepared on the 1971 trout season and distributed to Commission personnel, outdoor writers, sportsmen leaders, and other persons. Similar kits were developed on coho salmon in Lake Erie. The Office of Information also provided detailed information, on request, to hundreds of outdoor writers, fishermen boaters, and other persons requiring special knowledge about Pennsylvania fishing and boating. This Office also prepares and distributes to all employees a quarterly newsletter containing news of primary interest to Commission personnel.

BUREAU OF WATERWAYS

Boating Registrations exceeded 123,000 for the 1971 registration year which is an increase of 7,000 over the previous year.

Boating accident statistics are as follows with previous years statistics appearing in parenthesis:

1. Number Reportable Accidents 84 (79)
2. Number Fatalities 26 (35)
3. Injuries 50 (49)

Of the 26 reported fatalities, 15 involved boats which were not mechanically propelled and therefore exempt by present law from providing a Coast Guard approved personal flotation device for each person aboard.

Our three lesson "Boating Pleasure" educational course was completed by 1515 during the fiscal year as compared to 635 completing the course during the previous year. This brings our total to date to 3474 persons satisfactorily completing the course. Present Commission plans are to greatly expand our educational program during the current year by presenting this course in nearly every County of the Commonwealth.

All salaried Waterways Patrolmen completed the Standard First Aid Course presented by American Red Cross.

Publication of a monthly Boating Newsletter was initiated which contains various boating statistics and activities of the Bureau of Waterways. Request for boat Capacity Plates required on all boats sold or transferred that are less than 26 feet in length (except canoes and sailboats) continued to increase. During fiscal year 1970-1971, 3,212 plates were issued, compared to 2,245 issued during the prior year. Number of Capacity Plates issued to end of fiscal year, June 30, 1971, totaled 6,046.

Three new Patrol Craft, consisting of two 18 foot, 165 H.P. I/O's and one 32 foot cruiser powered by twin 225 H.P. inboard engines were added to our patrol fleet. In addition three 16 foot outboard work boats were acquired. Nine older outboard engines were replaced with eight new 80 H.P. and one 115 H.P. engine, as well as nine boat trailers were acquired. Presently 122 Patrol Craft are used by enforcement personnel of the Commission on Commonwealth waters.



Newest addition to the "fleet" is this 32 foot vessel powered by twin 225 HP inboard engines. The cruiser is berthed at Presque Isle.

Our force of 80 regular enforcement personnel were assisted by more than 100 paid Security Officers during the busy boating season. During this period 9,577 vessels were boarded. A total of 2,711 written Warnings and 1,613 Summons were given to violators. Additionally 4,154 craft were inspected and issued approved Inspection Decals for meeting legal requirements. This represents an increase of 1,422 decals over the previous year.

Patrol Officers assisted 143 vessels in distress, gave help to 405 persons, and protected property valued at \$286,935.00.

LAW ENFORCEMENT DIVISION

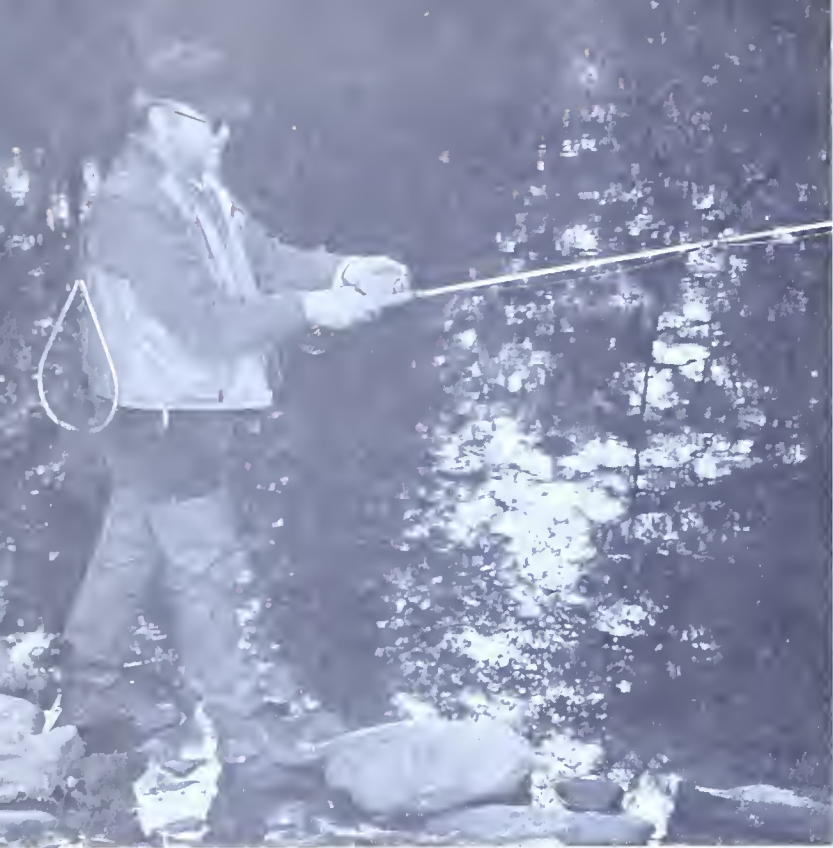
Waterways Patrolmen, assisted by Special Waterways Patrolmen, provided a record number of fishing schools, boating safety schools and other conserva-

tion programs for those persons interested in fishing, boating and the protection of our environment. Field patrols continue to show an increase in the number of violations of fishing and boating laws and regulations. The number of pollutions reported and investigated by field officers has reached an all time high, with the majority of the parties responsible for the pollutions being prosecuted and restitution made for the fish killed.



Officer Kopena literally has his hands full! Pollution investigations throughout the Commonwealth demand a substantial percentage of the Waterways Patrolmen's time in the field. During calendar year '71, 390 cases of pollution were investigated by the Law Enforcement Division.

During the year regional meetings were held in each of the four regions to provide the enforcement personnel with briefing on Commission policy and programs. Training programs for all Special Waterways Patrolmen were conducted during the year. Pollution and boating safety were stressed at these meetings.



*undisturbed solitude . . . the
still waters of a shaded pool
hold promise.*



*contemplating the beauty of
the Shohola, it's difficult to
keep your mind on the fish-
ing.*



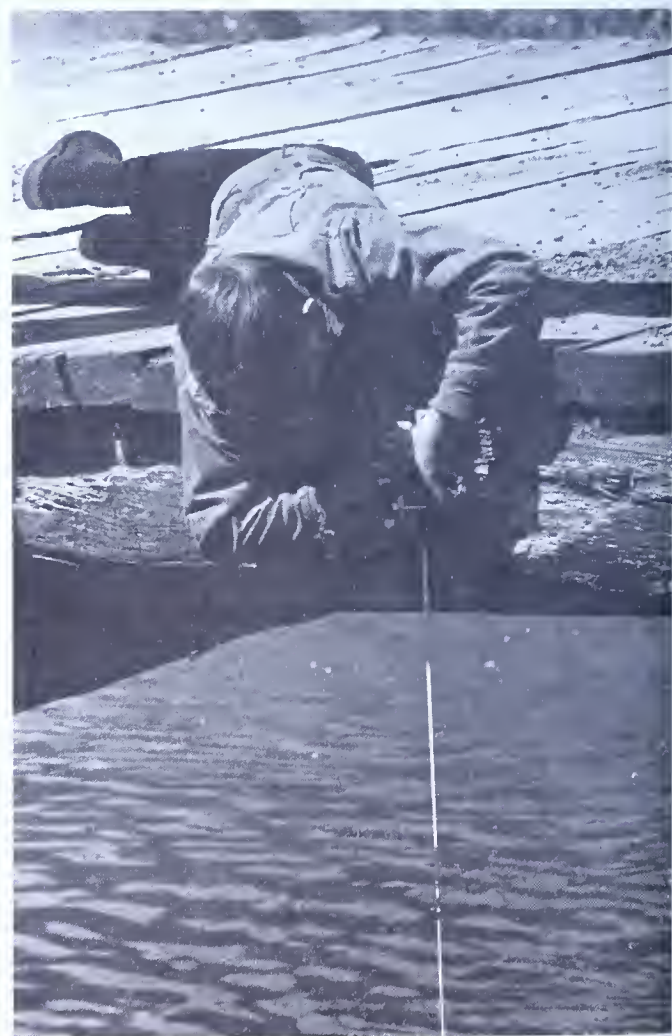
the broad flats . . . a joy to

anytime . . . anywhere

TROUT

Pennsyl

*boy? time? place? unknown . . .
does it really matter?*





sherman . . . match the hatch.

re's nothing quite like **FISHING** *a Style*

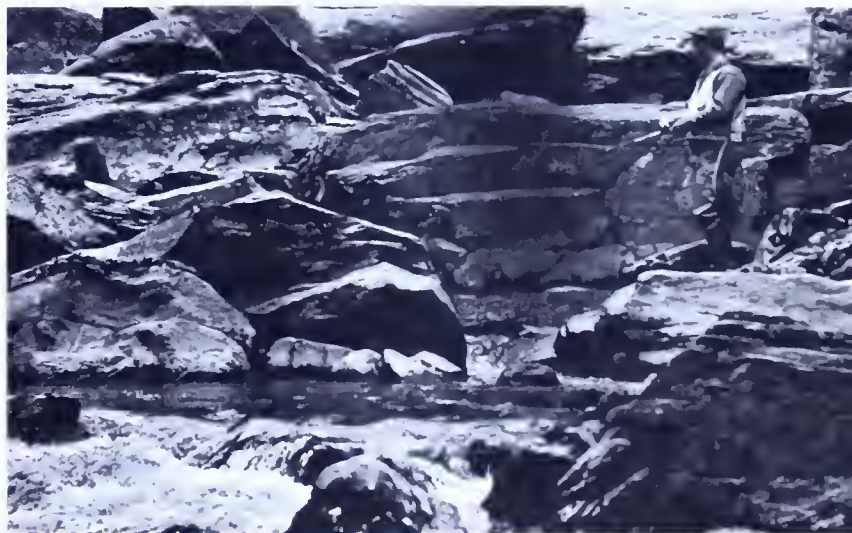
*success! . . . maybe—"there's many
 a slip twixt strike and creel."*

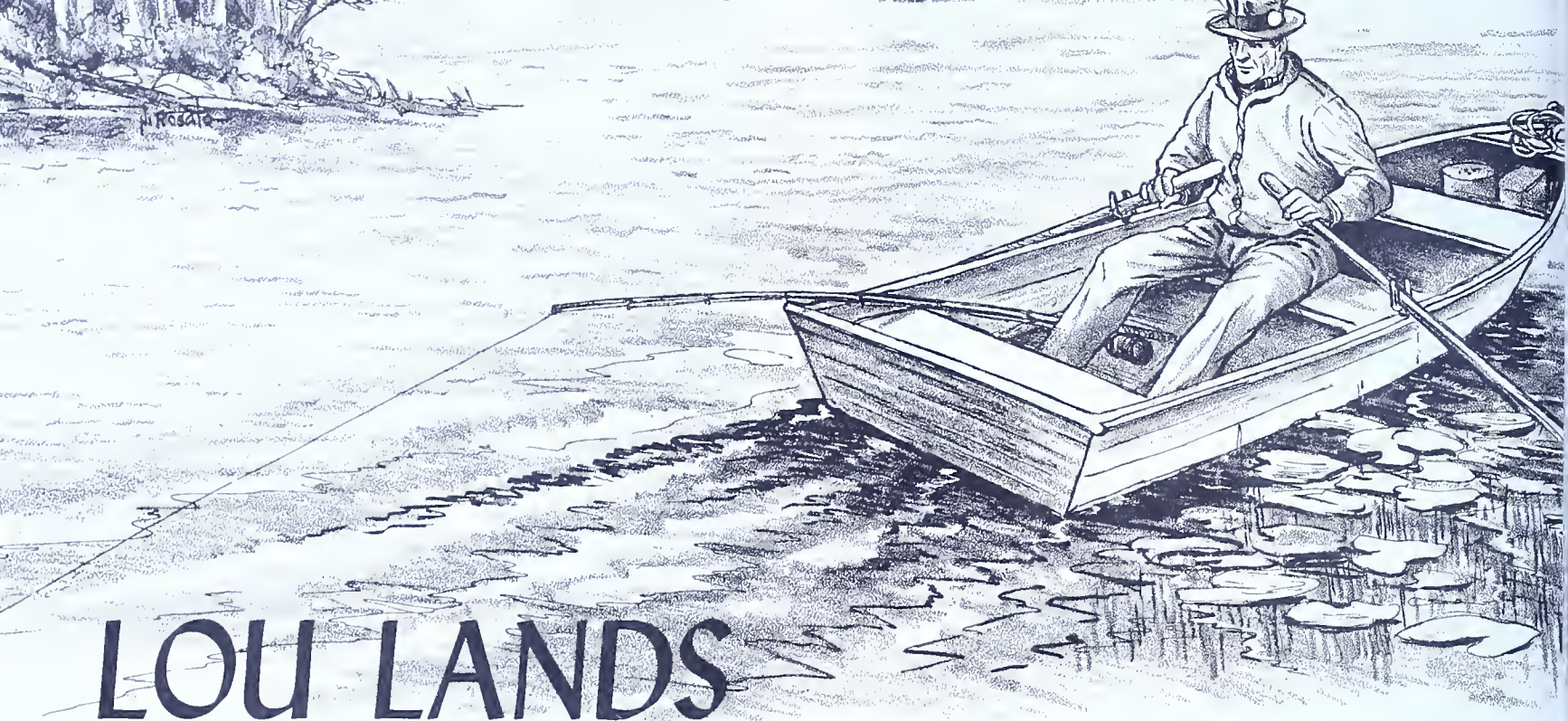


*"they're in there man, I see
 them" . . . a smile of satis-
 faction.*



*twisting, turning . . . the fas-
 cinating Conewago affords
 trout cover at every turn.*





LOU LANDS The Giant MUSKY

Although "Lou" Walker's musky has long been Pennsylvania's record "lunge," few PENNSYLVANIA ANGLERS have ever read "his" account of catching it. The following story is from the book, "Let's Go Fishing," by Charles Reitell, copyright 1931, Whittlesey House, McGraw-Hill Book Company, Inc. and is used with permission of McGraw-Hill Book Company.

In the northwestern corner of Pennsylvania there is a small lake called Conneaut. This body of water is about three and a half miles long, and averages a mile in width. It is fed largely by springs and thus keeps a fairly good temperature throughout the year. It is well known for its weeds, yet it has large areas of open waters and deep holes, some of which go down a hundred feet or more. This lake is just about ideal for most of our inland fishes.

Lake Conneaut, therefore, has become an extremely popular place for fishermen. The weeds have made possible a large supply of yellow perch and sunnies, which afford excellent sport for those less experienced in the art of angling. Pike-perch, bass, and catfish are sought after by the more experienced fishermen.

But it is muskellunge that makes

Conneaut famous. Probably no other body of water in the United States of so small a size has provided so many "muskies." And much of the fame of Conneaut's muskies is due to a real muskie fisherman, Louis Walker, Jr., of Meadville, Pennsylvania. He is the chap who makes these zippers for our tobacco pouches and goloshes. On September 30, 1924, he won the great honor of catching a muskie fifty-seven inches long with a weight of fifty-four pounds. From all I can gather this is the largest muskie ever caught by rod and line.

In order to give you all the thrills that came with the landing of this prize beauty, I have asked "Lou" to give you the story of the catch from his own pen. You will note the considerable intelligence that he used in handling these mighty fellows; few fishermen remain as calm as he when face to face with the high-powered action that a muskie is capable of producing. Yet here is an interesting incident. This same calm-headed "Lou" went trout fishing with me last spring. We were using the black gnat flies with little success. All of a sudden about twenty-five yards down stream I heard a terrible yelling: "Doc, hurry, hurry; I've got a whale and can't handle him." I dropped my rod and deer-footed it toward "Lou." As I neared him I saw

that he had an immense brown trout that was "raising Ned" around a big stump underneath an overhanging bank. Time and again we saw the brown spotted fellow shooting in every direction, and very conservatively I would say that he was eighteen inches long. "Lou" estimated twenty-four inches; but what is a half foot between two friendly fishermen?

We had no landing net. That was the great regret. The calm muskie fisherman, handing his rod to me, jumped forthwith into the four-foot stream, and grabbing his old slouched hat, attempted to land that brown trout. No censor would ever allow me to repeat Lou's now famous oration "Using hats for landing nets," first delivered on Tubs Run just one second after a big brown trout slapped his tail in "Lou's" face, snapped the leader, and went off into the great unknown.

I just cannot understand or explain to you fishermen how this fellow, calm with giant muskies, fails in tranquility in the trout streams. He cannot explain either.

Here is the story of the landing of the giant muskie just as "Lou" writes it to me:

"On the morning of September 30, 1924, I left the dock at Conneaut Lake Park, on the upper end of the Lake, about 6:30 A.M. It had been

raining very hard for several days, and the Lake was at least two feet higher than usual. There was a slight north wind, but not enough to make more than a ripple. About one-half mile down the Lake from where I started is a point extending into the Lake, which has always been a favorite fishing ground of mine. In fact, about three days before I had caught a muskie there that weighed twenty-eight pounds.

"As I was in a hurry to reach this place, I rowed rather faster than usual, until I got nearly there, when I stood up and cast over a favorite patch of weeds. Getting no rises, I started to row to the point itself, and after going a little way, stopped to light a cigarette. Of course, my boat was moving along a little, but the bait must have sunk, as I did not see the strike. It was not a usual strike, as my reel turned over only once or twice, and the usual muskie strike is very vicious and takes out from six to fifteen feet of line. Of course, I stopped the boat at once, thinking perhaps I had hooked a weed, but as I backed up, the line continued to go out very slowly; so I knew I had a fish. For some reason it did not settle at once, as a pike or lunge usually does, but kept moving along. For this reason I began to think I had picked up a pike-perch, which are very plentiful in the Lake. I have caught them up to nine pounds in weight. Finally, however, I stopped for a moment and then moved off rather swiftly. Of course I struck at once and immediately knew it was not a small fish that I had hold of. Even after the strike this fish did not make the usual first run, nor did it come to the top of the water as usual.

"My method of fishing for muskies is somewhat different from that of other fishermen. The only bait I ever have is "live bait," or rather dead, as I always kill the chub, sucker, or



shiner. I do this because I hook the bait crosswise in order to make it spin, and it will not do this when alive. Of course, I sometimes cast over likely patches of weeds and use a very short line; in fact, not more than the length of the pole, as I have found these fish are not at all afraid of the boat. My greatest success, however, has come when I was dragging the bait about thirty feet behind my boat and moving along at a rate that would keep the bait in sight and probably only six inches under water. In this manner I find it possible to work over weed beds where I know the fish are to be found, and also generally have the pleasure of seeing him when he strikes.

"But to go on—fortunately, I was near the edge of the weeds, and the wind was right, so that I very shortly found myself over one of the deepest holes in Conneaut Lake. The fish kept going deeper and deeper until at one time it had over a hundred feet of my line, and I was beginning to get worried. It was fighting savagely with short quick runs, and I was very careful not to give it a chance to put its weight on my outfit. I succeeded, however, in gradually getting my line in; and finally, a half-hour or more after I had hooked the fish, it came to the top of the water for the first time about sixty feet away from the boat. I will have to admit frankly that when I saw what I had on the end of the line, I did have a few moments of buck fever, even after all my years of experience catching muskies. It looked as big as the boat! It took about an hour and a half to boat this fish.

"After being on the top of the water for about a minute, down he went again, and carried on the battle for at least twenty or twenty-five minutes more forty or fifty feet under the water. Finally, I worked him up to the top of the water again, this time about fifteen feet from the boat, and again I 'pretty nearly had a fit' when I discovered that instead of being hooked in the stomach, as is usual when using live bait, this muskie was hooked only in the corner of the mouth, but fortunately in the gristle, which is hard to tear. The hook was not even through this gristle, but was sticking in about a half-inch. Fortunately, I always use a stiff hook, though not a particularly large one.

"As soon as I discovered this fact, I knew that I must get him the first time I tried to net him or all would be lost. I always net a fish and have



never shot or stunned one with a club, as I believe netting gives the fish a better chance; it also adds considerably to my fun in fishing. After coming to the top the second time, the fish proceeded to perform all kinds of gymnastic exercises on top of the water, but he was too big to jump. My heart was in my mouth all the time, as I expected every second the hook would tear out, though I was putting as little pressure as possible on the line, but of course keeping it tight. Finally, I worked the muskie in close to the boat. He was now on his side, but still going pretty strong; yet on account of the way he was hooked I took a chance, and by great good fortune got him in the net, head first. I use an extra deep net, probably thirty-six inches deep. It is however, rather narrow at the top, as I do not like to have a netted fish double up in the net; a big one will break his way through in pretty near every case. The tail of this fish stuck out of my net at least two feet. This, however, was really a piece of good luck, as it enabled me to clamp my knee on the tail in getting the fish over the edge of the boat; and by getting hold of the ring at the top of the net I was able to slide it into the boat. I could hardly believe my eyes when I looked at this specimen. As I usually do, I put the head of the fish under the seat at the end of the boat and the tail under the seat I was rowing on. All the time I was fighting the fish, we had been working down the Lake, but I had been careful to keep out in the middle, where it was deep, by taking a few dips of the oars, though in truth, the fish had pulled me most of the way. I at once started back to the upper end of the Lake, but after about a minute's rowing the muskie decided that it didn't like its position, and I certainly had a battle for three

continued on page 28



The NIGHT Creatures

by Richard F. Williamson

My friend, Joe, had his hands full! His rod was bent in a sharp arc. His line was as taut as a fiddle string and unseen in the water beyond him, a fish kept an unrelenting pressure . . . tugging back and forth tirelessly against the strain of the line that held it. There were no spectacular leaps or runs, but that steady, unyielding pressure.

Now, don't expect to read that a huge trout or bass was finally led to the landing net. Joe finally hauled his catch up on the sandy shore and stared at it with a mixture of surprise and disappointment.

The fish he had hooked and successfully landed was a six-pound eel with his line wrapped around its slick body a half dozen times! Even on land it continued its battle until Joe finally, in desperation, cut the line and plopped his catch into a burlap sack!

That ends the story—except that on the ride back home the eel got out of the sack and slithered around inside the car, teaching Joe the lesson that an eel doesn't give up the ghost easily.

Despite its snake-like appearance, (which is repulsive to some anglers,) the American eel is important in both commercial and sport fishing. It annually provides many *tons* of meat for American dinner tables—most of the "tonnage," of course, is provided by commercial fishermen.

But eel fishing can also be a relaxing and interesting sport. There is no need to worry about delicate casts, fine leaders, and matching natural insects or other forage which are staples in the diet of fish. Eel fishing takes an angler back to the days of his boyhood, when he fished with a cane

pole and a gob of worms, and if he is willing to admit the truth, gave him more fun than the angling he now does with sophisticated modern fishing gear.

The night Joe hooked his big eel, three of us were fishing a large pool in a creek, a tributary of the west branch of the Susquehanna River. We had gone to the pool early in the evening. When it got dark, we built a fire along the shore, baited our hooks, and set our rods in the forked sticks we had pushed into the sandy shore. We relaxed around the fire and talked. We didn't worry about missing strikes, for we had obtained celluloid baby rattles at the dime store, cut off the bells, and attached one to each rod tip. In the darkness, the tinkling of a bell would mean that we had action. Actually, we were fishing for catfish. The eel was a bonus. But bullhead anglers who fish at night often tangle with eels.

It is well for the angler to remember that while most fishing for eels is done in streams, ponds and small lakes often have populations of eels in reedy and grassy areas or in deep eddies that have stone ledges, pilings or stone retaining walls—provided, of course, that these ponds and lakes are connected to rivers and large creeks.

Eels have hearty appetites and are not choosy about their food. Daylight and clear water, however are not good eel-fishing conditions. Eels bite freely when a stream is muddy and the best time for angling for eels by far, is at night.

Eels feed on worms, small fish, minnows, crabs, and fresh-water mussels. They have a great liking for dead minnows, although they often show a

preference for small, live minnows. Most fishermen use worms or minnows when fishing for eels, and worms are probably the number one choice.

The worm should be bunched by inserting the hook about half an inch from the head, then again and again over the length of the worm's body at intervals of about an inch. This method allows the worm to hang in loops and covers the point of the hook. Obviously, husky night-crawlers are best, but if these big fellows are not available, two or three smaller worms may be threaded on the hook.

Eels have large mouths and a No. 1/0 hook is a good size. A sinker should be used to get the bait down into the water. Three split buckshot will get the hook down. Ideally, the baited hook should not rest on the bottom, but should be a couple of inches above it.

A fairly strong rod does the best job. My own preference is a casting rod with either a casting or a spin-cast reel, either of which make it easier to control the line and the action of a hooked fish.

The fishing technique is simple. Cast the baited hook into the water, reel in until the line is gently tight against the weight of the sinkers—then put the rod in a forked stick and wait for the action to begin.

There is no need to get all heated up when an eel takes the bait. The eel is a persistent cuss, and there isn't much danger that it will spit out the worm. More than likely, it will quickly swallow the baited hook.



The eel is a muscular member of the fish family, and it is capable of a strong, if not spectacular, battle. The angler using heavy tackle can horse it in, but the angler using light tackle can have lots more fun with his catch.

The eel has extremely small, deeply imbedded scales, therefore it must be skinned before it can be cooked. To skin an eel, nail it through the head to a board or the trunk of a tree or a post, then cut through the skin completely around its body just below the head. By grasping the loosened skin with a pair of pliers, the skin can be peeled off from the head to the tail.

The fresher the eel, incidentally, the easier it is to skin. One word of caution: Under the outer skin you will see a bluish underskin. You cannot remove this skin, and there is no need to. I tried it with the first eel I ever caught and learned that bit of lore the hard way.

The eel can be cooked after it is cleaned, just as any other fish would be, and cut into pieces about six inches in length. Eel is delicious any way it is prepared for the table. It can be covered with flour and fried in butter; it can be stewed, broiled, or even pickled—Eel chowder is delicious!

Eels are not classified as game fish. In fact, the eel is not often mentioned in discussions of the so-called panfish. But eels *are* game, and their willingness to bite offers a welcome diversion for the angler who may be surfeited with all the science and mystery that have become so much a part of our modern-day angling.



(The following letter was mailed in response to Editor Peter Smyth's invitation to comment on the article in their February issue by Fred C. Clark, Jr. entitled, "Licensing Boatmen—One Man's Opinion."

Editor, Motor Boating and Sailing
224 West 57th Street, New York, New York 10019

Dear Editor:

The position long taken by the U. S. Coast Guard and so strongly supported by the National Association of State Boating Law Administrators (NASBLA) FOR *education* and AGAINST *licensing* was not arrived at and held to without very good reasons which are still valid. It was recognized that a boater needed to know so much more than could be tested for in the usual license-type examination that a licensing program would soon deteriorate into a revenue collecting procedure in the hands of local politicians. This point, and the impracticability of devising a meaningful test procedure which would qualify you to operate your particular boat on a particular type body of water under even ideal conditions, made all those who really studied the subject agree that boating was something else and issuance of a license was not what was needed.

It is less important to know that an approved lifesaving device is required for each person on board all boats (the type of information you might elicit in testing for a license) than it is to know the relative merits of the different types, how to use them and the fact that knowledgeable boatmen actually do don these devices under certain conditions and require those who can't swim to wear them under even more conditions. Also, that right here in this county last year or last week a father and two young sons drowned because they didn't know this. This is the kind of in-depth information that would come out in class discussion. The instructor would have some chance of creating the *right attitude*—the all-important ingredient to boating safety!

Caution, Courtesy, Consideration, Common sense and Compliance—not necessarily in that order—coupled with sufficient Knowledge of the basic fundamentals of Safe Boating and the need to operate *defensively* is essentially all the operator needs to know to be *qualified* to take his boat upon the water. While his enjoyment will be increased in direct proportion to his knowledge and skill, he does not need to know the difference between a lee shore and a lee helm, how to compensate or even read a compass, or all the Rules of the Road and requirements for lights to remove him from the "menace to navigation" category. He does have to know that the unexpected always happens and that tragedy strikes fast upon the water; that he must proceed cautiously until he knows his boat and the water, that he must be alert to what is going on inside as well as outside the boat and that different waters, weather and loading will affect him differently enough to warrant his constant attention even after he has gained considerable skill.

All of the foregoing can be taught in a relatively short course that would attract a sufficiently high percentage of the nation's boatmen on a voluntary basis so as to preclude any necessity for licensing as such with all the bad things usually associated with such a program. This will take an all-out, frontal attack on the problem! It is a novel problem requiring a novel solution.

A major reason why voluntary education has so dismally failed to reach the required number is that there has been too much *competition* and not enough *cooperation* in the effort! Each organization involved in Boating Safety education has been more concerned with teaching their course to their kind of people than they have been in trying to really get to everyone who operates a boat. It has been considered impossible. Consequently, as a result of increasing Congressional pressure on the Coast Guard to do better and soon in this field, we are facing a real threat of having boat operator licensing become an ugly reality in spite of the considerable evidence that it would not gain the objective. The Voluntary Education approach has never had an honest chance to succeed.

If the Coast Guard were to appoint a panel, either as provided for under Section 33 (a) of the Federal Boat Safety Act of 1971 to assist the Boating Safety Advisory Council, or some other way such as through NASBLA, with the single mission to devise a program *to make voluntary education work*, we would be on the way to a solution! That panel could very shortly come up with a course covering the basics and designed to affect attitude in not more than 6 hours—three 2-hour sessions. Pennsylvania already has such a course that could be considered as a starter and modified as the panel deemed advisable.

The Coast Guard would then print the course material, instructor's guides, prepare visual aids, etc., that would be available to the States at cost—the National Safe Boating Course or National Pleasure Boating Course for those who for some unknown reason recoil at the word "safe." This course would be sponsored by the U. S. Coast Guard but not labeled Auxiliary, Power Squadron, Red Cross or anything else—this because many of the people we must reach would be antagonized by old prejudices and mistaken ideas about all organizations which have so long attracted primarily the cruising boatman.

The States would buy these course kits with the money becoming available, for the first time ever, under Section 27 of the new law. Each State Boating Law Administrator would then have the responsibility to reach the boatmen in his state. He would recruit instructors from the Auxiliary, the Power Squadron, the Red Cross and from among school teachers or any other group he finds competent to teach this qualifying course. He could use the federal funds to pay instructors, rent classroom space with heat, light and janitor service (If necessary—we would still hope to have volunteer instructors and public-spirited companies offer their facilities.)

With everyone teaching this one simple but comprehensive course bearing the Coast Guard's approval, I contend that within 3 years 75 to 85 percent of all boaters would take the course, become qualified operators—not necessarily skilled seamen—and have a Certificate (part of the kit) signed by the instructor and recorded by the State to prove it.

At the end of the three year period during which everyone has had ample opportunity to take the course near his home at a convenient time, the word would be passed that starting next year, possession of the Certificate will be required if you are to be legally upon the water. So then, you say it becomes a license! What's the difference?

A big difference. This is not merely semantics. Instead of getting a *license* because you passed a T-F or Multiple Choice test at the sheriff's office and probably paid something to support the bureaucratic, red-tape system developed to administer it, you would get a Certificate attesting to your having been exposed, at least, to the whole subject in some depth. Mainly, you will be graduated with an appreciation of how much there is to know about boating and will be encouraged to take post-graduate training with one of the organizations offering such excellent courses. A real bonanza for those groups!

So, while some will certainly have to be made to attend, their numbers will be small enough so that they can be quite easily handled. Meanwhile, the State will have set up the system for Voluntary Education and Legislatures will find it much more palatable to require those who don't see the wisdom in joining up, to be required by law to do so.

One more caution—the solution does not lie in Compulsory Young Operator's programs. Most of our problems are with their older brothers and fathers—many of whom never operate a boat until well beyond any minimum age limit that might be set. The need is for every operator to take the course—certainly exceptions could be made for those who have already taken approved courses but I would recommend caution in being overly generous with a grandfather clause—we lose too many grandfathers!

Admittedly, this plan will require lots of cooperation and work. It will seem to some as downgrading the interests of their own organization. I contend it offers the best opportunity ever to strengthen their group and the satisfaction that comes with knowing you've done something to solve a problem *now* while it can be done the easy way. It's certainly worth a try!

And don't be lulled into thinking that "time is not of the essence." The reason it is more so than you might suppose is that many throughout the nation are reading the Coast Guard's announcement to re-study the matter as tantamount to their abandonment of the Educational approach as hopeless; many are considering Licensing as inevitable and are getting into position to enjoy it by rushing to get good seats on the bandwagon. They are gaining support from most of those who aren't looking far enough ahead to see the pitfalls of licensing but consider it the obvious solution. The longer there is delay in getting back on course, the harder will be the task of doing so. A momentum for licensing will build up that will be awfully hard to stop. Time is of the essence!

CHARLES E. LEISING, *Capt.*, USCG (Ret.)
Director, Bureau of Waterways
Pennsylvania Fish Commission



"Where There's A Will . . . There's A Way!"

photography by
STENCE MILLER

"is it my turn already?"

Fishing is one form of recreation that doesn't require hiring a baby-sitter. Waterways Patrolmen will attest that quite often as many baby carriages dot our waterways as the aisles of the local supermarket.

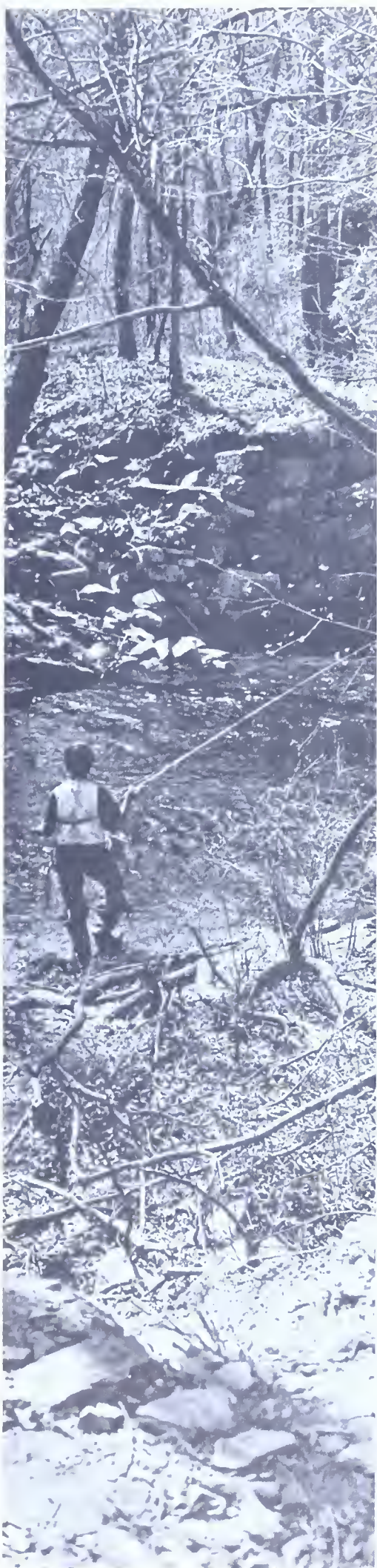
Mr. & Mrs. Robert Hubert, of Camp Hill, Pa. went a step beyond! Their handsome son, riding papoose-style can share every thrill . . . while Mom and Dad fish.

"no time to waste . . . there are fish to be caught!"

MAY-1972



A SULPHUR DUN DRY FLY



It is often difficult, if not impossible, to accurately judge the coloration of insects from their appearance in flight and this is particularly true of certain mayflies. In flight the beating of the wings often reflects the body coloration and this can give the viewer a completely different impression than when the docile insect is viewed in the hand. Both the male and female dun of *Ephemerella dorothea*, the larger of the two so-called sulphur mayflies, are guilty of this type of visual deception. When *dorothea* is on the water or in the air the overall impression is generally that of a yellowish insect. Yet, when one of the duns is examined at close range the wings invariably show a darker shade of gray than is apparent in flight. Needless to say, the angler who selects his artificial to match a visual image of the airborne insect is apt to be in error in his choice of fly. The obvious remedy to this predicament is cultivating the habit of catching and observing the insect at close hand. A small aquarium net and a miniature folding magnifier add little weight and bulk to the angler's gear but are important aids in the capture and examination of insects.

As a fishing hatch, the emergence of *E. dorothea* is one of the very best. In southcentral Pennsylvania it begins to appear early in May and the peak of emergence occurs around Memorial Day. From beginning to end it offers about six weeks of good dry-fly fishing and there aren't too many hatches that can boast of a span of emergence of such duration. On the water the dun is calm and serene, riding the currents for long distances before taking flight. Trout thus become well-acquainted with the naturals and often acquire a selectivity in feeding which places the most exacting demands on the artificial.

The Sulphur Dun pattern we are tying this month is the result of much experimentation over the past few years and the general design is applicable to any mayfly imitation

of medium to small size. Use of the tall, broad wing of mallard flight quill sections is made feasible by coating the inside surfaces of the wings, after they are in position, with the thinnest film of vinyl cement or one of the new vinyl floor coatings. Not only does the liquid vinyl assist in maintaining the shape and flexibility of the wings but it helps to hold the fragile fibers together during hard use. The tips of the wings may be trimmed round or left pointed, at the tier's option, but in either event the wings should be set straight on the hook to prevent leader twist.

The open palmer hackling sequence, running from front to rear, is a bit of unorthodoxy aimed toward a definite purpose. Here the intent is to flare the hackle slightly forward in front, and rearward at the tie-off in back. When the "V" is trimmed from the underside of the hackle the supporting barbles are set in the posture of the legs of the natural insect and the artificial balances beautifully on the water without tail support. Making the final tie-off and whip-finish underneath the base of the tails requires a little adaptation of thought but if you can make a whip finish without a tool at the head of a fly you can do it equally well at the rear.

The male dun of *E. dorothea* is sufficiently different in coloration from the female to warrant a separate representation, although the difference need apply only to the thorax. In the male version, in Step 4, a short length of rusty orange-brown dubbing (mixed from dyed angora yarns) is applied to the thread. In Step 5 the rusty thorax is wound from the eye to behind the wings. Then yellow dubbing is applied to the thread and the abdomen is formed as shown.

Chauncy K. Lively's column this month concludes an eight month series. As in the past, the column will resume again in our October issue. In the interim our readers will have time to use the flies they have been tying all winter and Mr. Lively will earn a much deserved rest (although it's the Editor's guess that he'll spend his "vacation" developing new patterns!)

TO TIE A FEMALE SULPHUR DUN:

◀ 1. Clamp a #16 dry-fly hook in vise and tie in fine yellow thread at bend. Select three cream hackle barbules and tie in as tails. Wind thread over tail butts and half-hitch about $\frac{1}{3}$ shank length behind eye.

2. From a right and left gray mallard ▶ flight feather cut matching quill sections for wings. Tips of wings may be trimmed round (as shown) or left untrimmed. Match wings and tie to hook wet-fly style with glazed sides of quill sections back-to-back. Effective wing height should be equal to entire length of hook, including eye and bend.

◀ 3. Pull wings upright and wind behind base to lock in position. Trim away butts and wind thread to eye. Then with bodkin point apply small drop vinyl cement (or vinyl floor coating) to base of wings and spread quickly to tips, removing any excess.

4. Select one each dark honey and pale ▶ dun hackles with stiff barbules as long as about twice the gape of hook. Strip away soft barbules near base and place hackles together with dun hackle at right. Tie in both hackles together by their butts in front of wings. Hackles should be positioned on edge, with glossy sides facing bend. Then wax about 2" of the tying thread and apply a dubbing of strong yellow kapok or spun angora fur.

◀ 5. Wind dubbing in a neatly tapered form back to bend. Half-hitch thread, allowing a little space between end of dubbing and base of tails.

6. Wind hackles individually in open ▶ palmer style back to bend and tie off each in front of tails.

◀ 7. Whip finish thread underneath tails around bend of hook. Trim excess thread and apply finish lacquer to exposed windings in rear.

8. (Front view) With sharp scissors care- ▶ fully trim away a V from the bottom of the hackle, from front to rear.

◀ 9. Finished Sulphur Duns: Female left; male right.

10. The real thing: *Ephemerella doro-* ▶ *thea*, the female dun.





HARD TO BELIEVE!

Many fishermen ask "what is the best bait for catching a musky?" There are a few which are outstanding, and over the years have accounted for most of the muskys caught.

On occasions, however, when a musky is really on his feed, he will hit almost anything. I went bass fishing one afternoon in October and hooked, and immediately lost, a musky on a small purple colored hellgrammite. A short time later I hooked a smallmouth bass and the same musky grabbed the bass as he was being landed. Again the musky got away. Still later I hooked the same musky on a gold colored balsa wood plug and once more he worked loose. Finally, after an hour or so, the same fish hit a small gold spinner and was landed.

This was one of the most strange and exciting experiences that has happened to me in all my years of fishing and certainly magnifies just how unpredictable a muskellunge can be.

James T. Valentine
WWP (Huntingdon County)

BRAVO!

Two boys worthy of mention for a job well done: Mark Corbelli and Ian Reed of Indiana, Pa., both age 14. It all happened when I was on patrol the evening before Trout season opened. Approaching the Horner Bridge that crosses the West Branch Clarion River I saw beer and pop cans all over the road on both sides of the bridge. As I crossed the bridge, cans were flying out of the brush. Not knowing for sure what was going on, I parked the car and was amazed to see the two boys cleaning up trash along the road in the brush. The "litter" was the accumulation of a couple of years and could have filled a pick-up truck! I thanked the boys and told them to make two big piles and I would pick all of it up when I had more time. I did pick up the litter that consisted of everything imaginable a couple of days later. This was private property and I am sure the landowner appreciated the cleanup

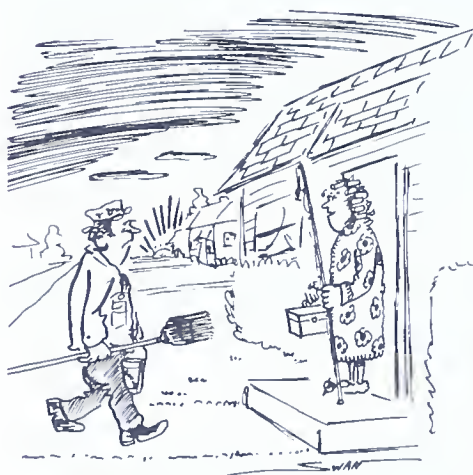
thus allowing this beautiful stretch of trout stream to remain open for all fishermen.

Bernard D. Ambrose
WWP (Elk County)

MUSKY SPECIAL

Want to know where to go for muskies and be certain that the waters contain muskies? Try Gordon Lake, Bedford County. During the month of May last year on several occasions five large muskies were noticed swimming around a point of a ridge at the "wide waters"—this is a favorite location at Gordon Lake.

William E. McInay
WWP (Bedford County)



I THOUGHT YOU'D BE BACK!

TASTY BAIT

While patrolling Frances Slocum Park Lake, Special Waterways Patrolman Heiser came upon a trio of fishermen trying for bullheads. The fellow in the middle was not making out as well as his buddies on each side of him—they each had six fish and he had none. SWP Heiser checked his bait, and found that he was using various colors of jelly beans and suggested that this might be the reason he was not catching fish. The gentleman agreed that it might be better to try another type bait, but said that if he did not catch any fish, he could always eat the bait!

Edward W. Manhart
WWP (Luzerne County)

BORN LOSER?

While stocking trout in Pine Creek during the in-season stocking we had the usual run of truck followers. At one of the bridges where we stopped there were four or five people waiting for the fish to be stocked. One of those in waiting saw he was too far away from where the fish were dumped, and so he started for the upper side of the bridge, probably wanting to be the first to get the freshly stocked fish. As he came around the upper side of the bridge and started back towards the stream, he fell—landed on his rod and broke it! Needless to say all those Sportsmen who were helping carry the buckets really had a hearty laugh over this incident.

Raymond Hoover
WWP (Tioga County)

OLD CHEW

Last year SWP Robert G. Snyder received a call from a man who wanted to know how to get a replacement fishing license, as his dog had chewed his original one up. SWP Snyder told him the procedure, and this year the man called and told him the same thing happened and that maybe we should change the paper to a more durable material!

Gerald T. Crayton
WWP (N. Allegheny County)

SLOW DOWN!

While on Motor Boat Patrol on the Clarion with SWP Cooper and Wynkoop, we observed something in the water. A close investigation of the object revealed that it was a woodchuck—swimming across the river, about one hundred yards wide. When we approached, it stopped swimming and acted as though it were ready to defend itself. We turned on the blue light, and idled the patrol boat along side as it continued to swim, thus causing the other boaters in the area to slow down, and not create any excessive wake, giving Mr. or Mrs. Woodchuck (as the case may be) much calmer waters. When the chuck reached the opposite shore, it turned and looked back, then ambled off into the brush.

Robert J. Cortez
WWP (Clarion County)

WHAT IS IT?

I wonder what happens to people when they go fishing and boating that makes some of them do things that they would not do at other times. I watched a fly fisherman wade up

through a hole in a stream where shore fishermen were fishing, having no regard for their sport. I had another report that a young fisherman, Kenneth Clark, age 8 of Lords Valley, Pa., was fishing from the shore on the Shohola Creek at the Shohola Waterfowl Area and he caught an 18½" brook trout. By the time he got the fish to shore and safely landed, boats had come from all around and had completely taken over the area where he had been fishing. I have watched boaters that seem to have to pass as close to other boaters and fishermen as they can and water skiers have to get close enough to shore or other boats that people can see them "up close." I observed a sailboat come so close to an anchored fisherman's boat that he caught his lines. I watched a boater that cleans and waxes his boat just about every weekend go through a mooring area and close to a slip dock causing such a wake that a boat broke loose and was rubbing against the side of the dock marking the side with deep gouges. If everyone would use good judgment and have a little consideration for the other person, then everyone could enjoy their fishing and boating.

Joseph E. Bartley
WWP (Pike/Wayne County)



CONSCIENTIOUS?

While riding through Lackawanna State Park, which is under construction, my oldest daughter, Liz, said to her mother "Look down there, that's where the lake is going to be." My wife Pat replied, "That's right, and Dad is going to stock fish in that lake and take you fishing." Our youngest daughter was sitting there listening to the conversation and suddenly interjected, "Liz can go fishing

with Dad but I can't!" I turned and asked Jean why she thought she couldn't fish, to which she replied, "I have no license, Dad". Liz, the oldest, is four and the "fisherwoman" without the license is three!

Robert E. Fasching
WWP (Lackawanna County)

CO-OP CHAMPS?

The Potter County Anglers Club have completed their in-season stocking program. A total of 60,000 trout were placed in the streams of Potter, Tioga, Clinton and Cameron counties. These fish ranged from legal to monsters of two to six pounds. One man from Coudersport caught three trout from Lyman Run Lake with a total weight of 17 pounds!

Kenneth Aley
WWP (Potter County)

GO AWAY!

Prior to the stocking of rainbow trout in the Ridgeway Reservoir one particular day, a fisherman from Johnsonburg had five trout on his stringer. After we stocked the rainbows, he fished for four hours and failed to catch his sixth fish. We had even stocked a bucket of trout practically in front of him! Guess we gave him bad luck.

Bernard D. Ambrose
WWP (Elk County)

HO! HO! HO!

As a Waterways Patrolman, I become involved in many phases of public relations work which are probably considered above and beyond the call of duty. As I look back, perhaps the most rewarding experience of all occurred one Christmas Eve when I had the privilege of playing Santa Claus for the elderly men and women of a nursing home in New Brighton. That evening I learned the true value of the Yule Season in bringing a little happiness into the hearts of others. On the other hand, my role as Santa led to a very comical happening. After doing my thing as Santa, I removed the hat and beard. This was a mistake! I stopped at the Post Office around 9:30 P.M. to check my mail. There in the lobby stood a young boy about nine years old. The lad's face beamed a smile from ear to ear as he pointed at me and said, "Ah ha! I caught you with your beard down!" Talk about being lost for words? All I could think of to say was, "By jove you did!"

Donald Parrish
WWP (Beaver County)

SOME MINNOW!

Fishing for Walleye and Musky in Warren County is very popular and productive. But one big problem is obtaining bait, especially minnows, during the cold months. Anglers guard their best bait spots religiously. A local newspaperman we know, a very "Clever" fellow, discovered a good source—in a small tributary stream. There was one problem, however, there were a number of minnow traps in the area already. Our friend set his trap with the rest, but was evidently considered a claim jumper. Imagine his surprise the following day our "Clever" friend found a very dead opossum in his trap! The reporter's name? "Clever".

George R. Jones
WWP (Warren County)

COOPERATION PLUS:

The road leading to Oxbow Lake is not used during the winter months and with our snows of all winter piled up I thought I would have to cancel last year's pre-season trout planting—until I talked to Ed Forba the President of Lake Carey Sportsmen's club. He made arrangements to have the road plowed. Although the road had been plowed, the truck still had trouble getting out. Mr. Forba again came to the rescue and borrowed a tractor to pull the fish truck out! Many thanks to Mr. Forba and the Lake Carey Sportsmen's club, for the assistance with the road and members of Nicholson Sportsmen's club for the assistance in stocking the fish.

Stephen A. Shabbick
WWP (Wyoming County)

IT TAKES GUTS!

Mr. Syl Zembrowski, a photographer for the Valley Daily News in Tarentum, called me the day prior to the opening day of trout to relate the following story:

The newspaper had Ed. Kasavage, of New Kensington, dress up in fishing gear and stand in the middle of Bull Creek, a newly stocked stream in Allegheny County, to obtain pictures for the Saturday edition.

About this time a fellow came running from the highway some 200 yards away and hollered, "I see it but don't believe it, I know some guys will sneak fish at night, but it sure takes guts to fish in broad daylight with those wardens around!" Then he added, "You'll probably get away with it", and walked away.

James R. Smith
WWP (Allegheny County)

BOATING

Questions & Answers

by Capt. Jack Ross

From T. G., Pittsburgh:

"How can I replace a cracked plank in a 16-foot lapstrake outboard boat?"

—First, clean all the paint off the strake above and the cracked section, so that you can find the fasteners. Remove all of the screws or rivets at each edge of the cracked section, and for about a foot further each way at the top of the bad plank. You should then be able to drive thin wooden wedges under the plank above the damaged one so as to lift it enough to cut out the cracked section with a keyhole saw, and have room to insert a new piece of exactly the same dimensions. Use backing blocks at each end of the patch, and put the new edge fasteners into sound wood halfway between the location of the old ones at the bottom. Use plenty of synthetic caulking compound all around, letting it squeeze out as you tighten the screws. A repair made in this manner will not affect the strength of the hull, and should be perfectly watertight.



From N. M., Aliquippa:

I understand the Germans use some kind of ring to increase the efficiency of a propeller; could I use this device on my 9½ hp. outboard motor?"

—It appears you are referring to the Kort nozzle, which is a short tube surrounding the prop that increases thrust by keeping the wheel in a confined stream of water. The effect is to increase the apparent density of the water, and provide the prop with a better bite. Kort nozzels are of significant effect on large diameter propellers which operate at low speed, and the benefit seems to taper off to nothing at wheel speeds of even a few hundred rpm. On a highspeed pleasure boat prop, either outboard or inboard, the nozzle would create significant turbulence in the propeller intake stream, and probably reduce efficiency. Kort nozzels are used

in this area on some of the larger river towboats, with varying results. There appears to be some increase in thrust, but this is offset by the considerable damage that occurs when a log or other heavy object is sucked into the nozzle, binding the prop and often breaking the shaft. So far as we know, there has never been a successful application of the Kort principle to a pleasure boat, although it has been tried by a number of companies.



From T. R. J., New Kensington:

"The Graymarine FB-140 engine in my runabout still runs well, but it is very hard to start if the boat is not used for a week or so; what can I do?"

—The best answer is two six-volt batteries connected in parallel. This will give you enough additional cranking power to get the engine started even though the ignition system is damp and the engine compression is not what it used to be. Also, all cable connections should be kept perfectly clean and tight, since six volts will not push a starting current through very much dirt or corrosion. Owners of twelve-volt boats with hard starting problems can also benefit from the two-battery system,

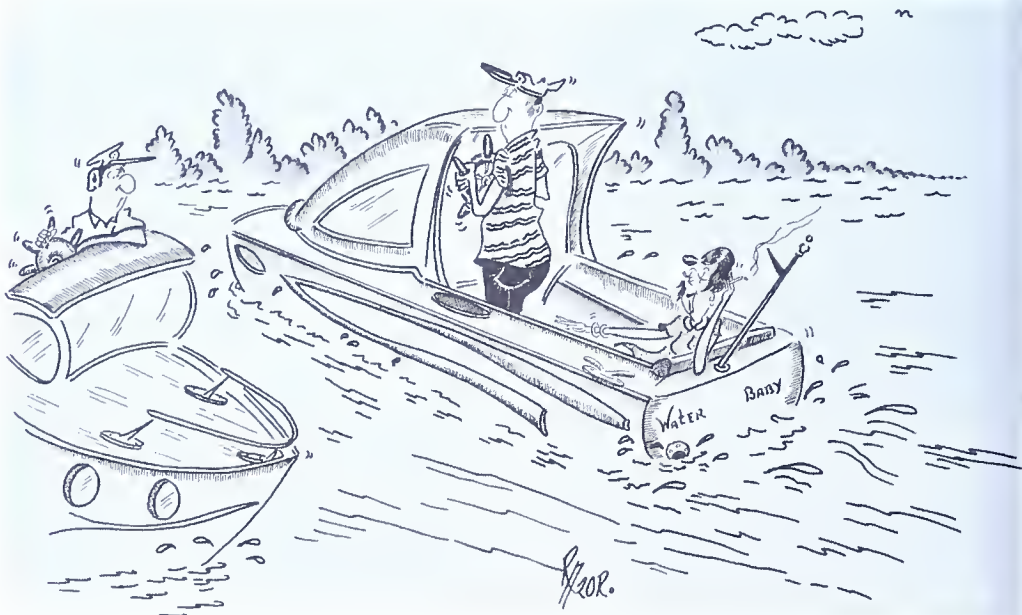
which is cheaper than a single heavy-duty battery of equal capacity, and has some insurance in that a bad cell does not kill the entire system, and requires the replacement of only one battery.



From V. P., Dallastown:

"What is meant by 'dead reckoning' navigation?"

—This is the process by which the estimated position of a vessel is calculated without reference to any outside objects. The elements are the course, speed and time elapsed since the last position, and any correction for drift or leeway produced by current or wind. Dead reckoning, or DR, piloting is used in bad visibility or when out of sight of land, but should not be relied upon too heavily since it is impossible to apply accurate corrections for the effects of current or wind. Navigators use DR positions to keep track of estimated progress between fixes on known objects or positions obtained by celestial navigation or electronic means. To emphasize the doubtful quality of DR positions, one instructor at the Merchant Marine Academy used to define Dead Reckoning as the means of navigation formerly used by a lot of dead pilots.



PITTSBURGH? WE THOUGHT IT WAS THIS WAY!

A Promise Is a Promise

continued from page 7

"We'd like two each," I said.

"Can't do it," he said. "Don't have too many and have to spread them around. But I can let you have some other colors."

With that he pulled out a black colored lure and a white, shad colored one.

"We'll take the shad color. Can always doctor them up with grease pencils," Howie said.

That evening, we were back out on the lake putting our newly discovered lures to work. And work they did. The walleyes literally went nuts over them.

Another boat happened to be near us that evening. Only this time the situation was reversed and we were having all the fun while the fishermen in the other boat looked on in frustration.

Finally the inevitable happened and as their boat drifted closer, one of them shouted, "What are you guys using?"

Howie turned around and looked at me. Then he pursed his lips, raised his eyes to heaven for help and cocked his head to one side.

"They're on your side of the boat, chief," I said, "you answer 'em."

"A metal lure," blurted Howie.

I almost choked on my cigar and Howie said, "What's wrong?"

"Sucked in a mosquito," I replied.

"What kind of metal lure?" came back the reply from the man in the other boat.

"Shall I tell them?" whispered Howie in desperation.

"They're on your side of the boat," I repeated.

The moment of truth was fast approaching and I could almost sense the panic in Howie's voice.

"A small spoon," he finally said.

The voice came back again from the other boat, "What color?"

He's really stepped in it this time, I mused.

"Black and white," shot back Howie.

"Thanks," came the reply. And then they started their motor and disappeared towards shore.

"How come you told them it was colored black and white?" I asked.

"Not too many of that color around and I didn't think they'd have one to try," he said grinning sheepishly.

"We'd best be getting back too," I said.

"Yeh," said Howie, "but let's give them a good head start . . . I shouldn't have lied to them!"

"You weren't lying," I said, "you were just keeping your promise to the other two."

"That's one way of looking at it," he sighed, nodding his head up and down.

"Yep," I said, hoisting the string of walleyes into the boat, "a promise is a promise!"

SAFE BOATING COURSES UNDERWAY

Following is a listing of Boating Schools scheduled throughout the Commonwealth by the Pennsylvania Fish Commission and the Coast Guard Auxiliary. The PFC three lesson, six hour course, titled "Boating Pleasure," is a free course for all age groups. Please notify the Waterways Patrolman concerned of your intention to attend.

REGION I (Northwest)

May 3, 10 & 17—7:00 to 9:00 PM
Game Commission Building, 1509 Pittsburgh Rd.
Franklin, Pennsylvania

May 4, 11 & 18—7:00 to 9:00 PM
Clarion County Courthouse
Clarion, Pennsylvania

May 8, 15 & 22—7:00 to 9:00 PM
Mercer Fire Hall
Mercer, Pennsylvania

May 9, 16 & 23—7:00 to 9:00 PM
Hickory Armory
Sharon, Pennsylvania

May 15, 22 & 29—7:00 to 9:00 PM
YMCA
New Castle, Pennsylvania

May 11, 18 & 25—7:00 to 9:00 PM
Polish Sharpshooter's Club, 650 E. 12th St.
Erie, Pennsylvania

REGION II (Southwest)

May 1, 8 & 15—7:30 to 9:30 PM
Rehabilitation Center, 727 Goucher Street
Johnstown, Pennsylvania

May 3, 10 & 17—7:30 to 9:30 PM
Beaver Sr. High School, Gypsy Glen Road
Beaver, Pennsylvania

May 4, 11 & 18—7:30 to 9:30 PM
California State College, World Culture Bldg.
Room 100, California, Pennsylvania

REGION IV (Southeast)

May 10, 17 & 24—7:30 to 9:30 PM
Reading Ski Club House, 2 miles N. of Reading
off Rt. 83 at Felix Dam, Reading, Pennsylvania

April 24, May 1 & 8—7:00 to 9:00 PM
Carlisle Fish and Game Association, off Rt. 641
East, Carlisle, Pennsylvania

April 24, May 1 & 8—7:00 to 9:00 PM
Nether Providence High School
Wallingford, Pennsylvania

May 3, 10 & 17—7:30 to 9:30 PM
Northampton County Courthouse, Ferry Street
Easton, Pennsylvania

May 24 & 31, June 7—7:00 to 9:00
New Bloomfield Fire House, High Street
New Bloomfield, Pennsylvania

May 3, 10 & 17—7:00 to 9:00 PM
Philadelphia Police Station, Bustleton Ave. &
Bowler St., Philadelphia, Pennsylvania

Also: remaining sessions of the 8 Week Coast
Guard Auxiliary Boating School

March 14, 21 & 28, April 4, 11, 18, & 25, May
2—7:30 to 9:30 PM
Monroeville Mall (Community Room) Route 22
Monroeville, Pennsylvania

LOU LANDS

The Giant MUSKY

continued from page 17

or four minutes in order to make it understand it couldn't get back into the water. Here came one of the most ridiculous performances I have ever indulged in while fishing; after getting Mrs. Muskie (the fish proved to be a female) quieted down, I discovered that in the fracas I had lost both my oars, and that they were being carried down the Lake by a slight wind. Here I was in the middle of the Lake with no other boat in sight, and at the rate I was going would not reach the foot of the lake for an hour or two. After some thought I decided to see if by paddling with my hands while sitting on the muskie I could make some progress towards the oars. Fortunately I could, and after one or two miscalculations I

was able to hook in one of the oars with my pole.

"After that it was easy going to procure the other and get back to the dock. To say that this fish caused some commotion is putting it very mildly.

"The muskie was immediately put in a live-box, but we found unfortunately that in the battle I had with the fish in the boat, I must have injured its back in some way. I brought it into Meadville the next day to have it mounted.

"This muskie officially weighed fifty-four pounds thirty-six hours after being caught, though I understand that it was weighed on other scales without my knowledge and weighed fifty-six pounds. It was fifty-seven inches long. Incidentally, it is unfortunate that the girth of the muskie I caught was not taken, for it was the thickest and fattest muskialonge I have ever seen. I was using a long cane pole with a forty-two pound

test Cuttyhunk line. The hook was a large size, very stiff Cincinnati hook, which I buy two for five cents. The leader was picture wire about three feet in length, with, of course, a strong swivel. The bait was an eight-inch red chub. I make this outfit myself, as I find it much better than any I can buy for this kind of fishing.

"Since catching this 'whopper' I have been fishing for two others I know of, which I believe will go to sixty or sixty-five pounds. I have seen them both, but have never been fortunate enough to have them strike my bait.

"I have a hunch that if I continue this wonderful sport I will sometime get hold of another great big muskie—and it certainly makes up for all the hard work and the other days of fishing when I never see a scale."

For me to write one solitary comment on 'Lou' Walker's own story of landing his big muskie would be anti-climax.

Fishing Outlook

continued from page 4

spinning outfit you can get by with hip waders. Silver spinners like #3 C. P. Swings used to be real effective but aren't as popular as they used to be. Live or pickled minnows catch fish as do angleworms and night-crawlers. Best bait, according to Mike Badner, Waterways Patrolman for Pike County—salmon eggs. Mike recommends the orange colored in either cheese flavored or plain. Mike stocks the Lucky pre-season and four times in-season with primarily rainbow trout. Some brooks and browns are always mixed in.

For the fly fisherman, and truly this is a great fly stream, chest waders are a necessity for good fly fishing here. Russ Lobb from Wallenpaupack has fished the Lucky for umpteen years and for early season he likes the Hendricksons, the March Brown and streamers. A trio of anglers from Matamoras have close to 100 years fishing time on the Lackawaxen. These fellows are fly fishermen and knew the river from the time you had to traverse the tow path along the canal to get to it—up until the present day.

Russ Malone, is the fly tyer in the group and he has noticed over the years that the size of the effective flies is gradually getting smaller. In fact he ties his favorite—the Henry-

ville Special (described in November 1970 Angler) on a size 18 hook. Russ starts out the early season fishing wets and likes the Light Hendrickson pattern. During this time he also uses a black, caddis type fly tied on a 3x long size 10 hook fished wet. When the fish are feeding on the surface he goes to dry flies, and according to him that Henryville is hard to beat in May.

Lou Weintz, Postmaster at Matamoras, has about 40 years fishing time on the Lucky. Like the others, he's a dry fly man primarily, but starts the season with wets. His favorite flies for the month of May are the light Hendrickson, the Gray Fox and the March Brown. Lou passes on this tip in regards to the discharges at Kimbles. He says, when you notice the amount of white foam floating on the river is increasing and the sound of the river itself is changing, this is a signal that the discharge has started and it's time to ease over to shore.

Bill Hazen has 30 plus years on the Lucky and he's also an early season wet fly man who changes to dries as soon as he can. Over the years he's caught his share of nice fish from the river and has lost more of those 6 and 7 pound "senior citizens" than he cares to remember. He is in accord with the selection of flies by the others in the trio and also calls attention to the great numbers of stone

flies in the water. With the others, Bill used to have some real night fly fishing on the Lucky, but as the years pass by they do it less each year.

If you're going to fish the Lucky this May have some wet flies in size 12 and dry flies in size 14 of the following patterns along with you. Early May—Light Hendrickson—a slow water nymph that hatches early in the afternoon and returns to mate and lay its eggs in the early evening as the Golden Spinner. Mid May, Dark Hendrickson; a back eddies nymph that hatches in late afternoon and returns in late evening as the early Brown Spinner. Mid May, March Brown, a fast water nymph hatches from mid-day and returns in evening as spinner. Late May, Gray Fox; a fast water nymph which hatches in late afternoon and returns in the evening as the Ginger Quill. The Caddis flies are slow water inhabitants and hatch late afternoons and return afternoons and evenings during all of May. Nymph-like, the cream honey bug and dries or wets like the Henryville special—imitate these. It's a good idea to put an apple green egg sac on some of your wet fly caddis imitations.

Parking along L.R. 51018 is limited. You have to pick a wide spot and get off the road. There are three private campgrounds within just a few miles of the stream and they're only minutes away.

Musky Fever

continued from page 5

except a chance to be out on the lake trying for a keeper.

While you occasionally see a fisherman bait-casting for musky, the majority of them are caught by other means. It is not unusual to catch musky while fishing for other kinds of fish. For example, I caught a 22" musky on a minnow while fishing for crappie. Trolling seems to be the principle method of fishing for musky, and most serious fishermen who pursue them troll. So—a boat of some size, shape and description is almost a necessity. Admittedly, there is some controversy here among avid musky fishermen. There are many "stalkers" who feel that nothing could be more boring than trolling. They feel that there is more action involved in casting.

Certainly there are several advantages to this method of fishing. The most important would seem to be that it is possible to get where the muskys are—in shallow water along the shore, places around stumps, and in weed beds where it is often impossible to get with a boat and motor. Where the muskys are is an important consideration that the fisherman should think about seriously. The muskellunge is carnivorous and has a ravenous appetite. This means that you are generally going to find them near available food supplies. Muskys are seldom found where there are no other fish for them to eat. Another advantage of bait-casting is that it is possible to vary the speed of the retrieve of the lure. This is something that is not always easy or possible when trolling. By using the bait-casting method it is also possible to run the lure close to the surface. This method of running the lure close to the surface is particularly popular with the group of fast retrieve enthusiasts. In this method, the lure is retrieved as fast as possible. This is usually done with a full spool of line or with a reel which has a gear ratio of 5:1. However, the fast retrieval seems to be precisely the major advantage to trolling for musky. However, a disadvantage to casting for muskys would be that it is not always possible to use deep diving lures. There are many musky fishermen who believe that the best way to get a trophy is by fishing deep—and the deeper the better. It is possible to do this while trolling. A lot of lures are lost this way but it does seem to get results. It is not uncommon for the advocate of this method to change the depth pattern of the lures with a pair of pliers. However, that group of bait-casters who feel that a lure should run just below the surface—about a foot—will adjust the lips of their lures so that they run accordingly. There seems to be a difference of opinion about this, but it should be understood that when it comes to fishing for "old ugly face," there are a lot of opinions. And this is probably what they are, just opinions, but the important thing is that whatever method is used, it usually works for whoever uses it.

Most of my musky fishing to date has been in Edinboro Lake in northwestern Pennsylvania. This lake is what is called a natural musky lake—meaning that there have always been musky in it. However, while a natural musky is still caught occasionally, most of the fish are products of the stocking program of the Pennsylvania Fish Commission. Other favorite musky waters in western Pennsylvania are Pymatuning and Lake Erie, and muskys are also caught in French Creek.

While there does not seem to be any set pattern for taking muskys, there are some things absolutely necessary. One necessity is good equipment. A heavy duty rod made especially for trolling is recommended. When a musky strikes, it is a rod bending experience and many is the musky that has been lost because the rod was not matched to the fish. A heavy duty reel is also recommended. Some musky anglers use reels designed for salt water use. A good service reel designed for the large fish is my preference. However, a good quality bait-casting reel will also do. Monofilament line in the 20-30 lb. category is also a good idea. A landing net, large enough to accommodate a fish of this size is a handy and useful item. Strange as it may seem to some anglers, getting a big fish into a boat can be quite a problem. Many muskys have been lost because the unprepared fisherman didn't have any way to land it! A fish that has sharp teeth on both jaws, as the musky does is not a fish to grab with your hands!

An advertisement in a national magazine uses this slogan: "the true sportsman is performance conscious." I feel this way too about equipment used for musky fishing. If you are going to fish for one of the truly great freshwater action fish that has the size, weight and endurance to test equipment . . . you don't want to lose him because you didn't make wise equipment choices. There are just too many other ways that he will be lost. You shouldn't have to worry about not having the right gear!

Another necessity is time. If you're a fisherman who has to catch something everytime out—or if you want a strike on every cast—then musky fishing is not for you. The usual musky expedition ends up with precisely nothing. It has been estimated that an average of 100 hours are spent fishing for every keepable musky! My son and I feel rather lucky taking "13" muskys this past season. Three of these were keepers—that is they were over 30 inches. We estimate that it has taken us about 25 hours of fishing for each of these. However, since I wrote this article, it's been a month since we've had a strike! It looks as though we are going to catch up to that average of 100 hours in no time at all.

The author, **George S. Morrison**, Ed.D. is Director of Early Childhood Education at Edinboro State College, Edinboro, Pa.

A FISHING FEATURE FOR FISHERMEN FROM FISHERMEN

FISH TALES

by Doris Katsonis



ED CRUMLICH of New Cumberland (left) has to be one of the most active musky fishermen in Pennsylvania. Here he holds a 42 $\frac{1}{4}$ -incher and a 44-incher which he caught last June from the Susquehanna River in York County. He now has 99 catches to his credit—he's holding out for a record breaker for number 100.

A West Mifflin resident, MIKE CREVAR, (right) proudly displays the 39 inch, 14 $\frac{1}{2}$ pound, musky he landed near Soldier Island in the Pymatuning last July. It hit a pearl spoon.



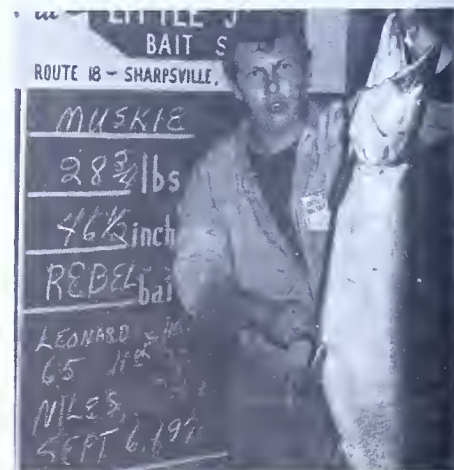
ROBERT J. LIGHT, Hummelstown, landed this 41-inch musky on his first cast of the night last February. It hit a $\frac{1}{2}$ ounce white bucktail and was treble hooked in the jaw. He was fishing the Susquehanna in Lancaster County.



HENRY WEINZIERL of Bridgeville poses with his big musky, 43 $\frac{1}{2}$ inches, caught on a Cisco Kid while trolling on Conneaut Lake last August. He earned a membership in the Husky Musky Club with this one!



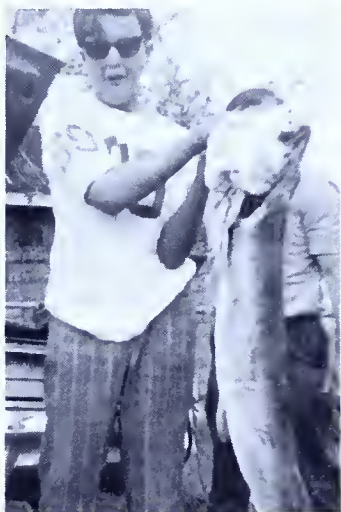
LOUIS V. POTTS of West Hickory was fishing Tionesta Lake in Forest County last August when this 32 inch, 10 pound, musky hit. It earned him an Honorable Mention Husky Musky membership.



This huge 46 $\frac{1}{2}$ inch, 28 pound, musky won a Fishing Citation as well as a Husky Musky Membership for LEONARD SHAW of Niles, Ohio. He was fishing Shenango Reservoir last September, using spinning gear and a rebel.



TOM SPADIN (above) of Masury, Ohio, caught his 15 inch, 1½ pound crappie on a minnow near east end of Whaley Island, while **JAMES E. SPIRNOCK** joined the Husky Musky Club with his catch of a 49¼ inch, 26 pound musky landed from the Allegheny River last July. It took a live sucker on Jim's spinning gear.



Two McKees Rocks anglers, **LARRY TAXACHER** (left) and **KEITH WADOWSKY**, 12, also became members of the Husky Musky Club and earned Citations for their musky catches. Larry caught his 50 incher at Conneaut Lake and Keith landed his from the Susquehanna River—it measured 47¼ inches. Both were caught last May.



Five year old **STEPHANIE HUNT** of York caught her 23¼ inch channel catfish at Lake Marburg on a nightcrawler last June, while **GERALD T. CHAPLESKI** (right) of Allentown got his 25¼ inch chain pickerel from the Lehigh River last January. He was using spinning gear and a minnow for bait. It earned him a Citation.



CHARLEY HASSELL and **BOB MOMBERGER** of Johnstown display a nice June days catch of largemouth bass taken from Somerset Lake. They ranged in size from 17 inches to 21 inches.



KARL SCHMIDT and son, **KARL**, hold the large carp dad caught in the Allegheny River at Pittsburgh using a doughball for bait. He enjoys battling the carp in the river and fishing for fun.



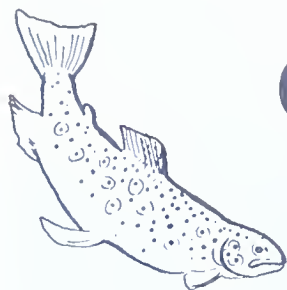
EDWIN GATES of Flinton used a jig rod and minnow to catch his nice 18 inch crappie from Glendale Lake last winter. Our record crappie was only ½ inch longer!



PAUL FELIX and **RICH RAMSEY** of Ebensburg hold the nice stringer of walleyes, a catfish, and a chain pickerel taken from Duman Dam on minnows last May, while **SHANE MERCER** (right) of West Grove holds the 15½ inch crappie he caught at Youngs Pond while fly fishing with a bass popper in July.



Another nice crappie is held by **RICK WILLIAMS** of Hanover. He won a Jr. Citation for the 14 incher taken from Lake Marburg. **GARY STEFAN** (right) is a familiar figure around the boat livery. He holds the 12 inch largemouth, his first, taken from the Pymatuning near Harris Island.

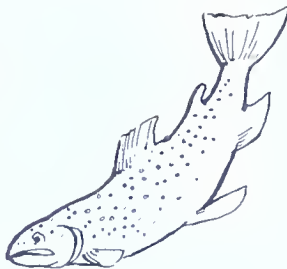


CASTING

WITH THE

CO-OPS

BY BILL PORTER



Oxygen and nitrogen are two elements that present a paradox for most sportsmen involved in the cooperative nursery program. Without enough of the first, there is trouble; and with too much of the latter, there is more trouble. There is a reasonable single cure, however, that solves these problems and that is proper aeration. Let's take a look at some of these issues clubs have faced and some solutions that have worked for them.

Lest we be accused of oversimplifying, aeration isn't the only answer to oxygen and nitrogen problems. Thinning crowded raceways helps; a more rapid exchange of water reduces the problem; adjustment of intake systems and the use of alternate sources of water are worth trying. Temperature plays a part with more



A modest aerating device in use at the Jenner Community Sportsmen's Nursery, Somerset County.

oxygen needed in warmer water. So shading, adding cooler water, reducing feeding operations, and similar activities will tend to balance the scales in the trout's favor.

The Cooperative Nursery Policy states that water quality includes a minimum dissolved oxygen of 6.0 ppm. There is nothing wrong with a little more, and on rare occasions, fish can get by on less. It is hoped that most of the nitrogen will work off into the air as it generally does when present in acceptable amounts.

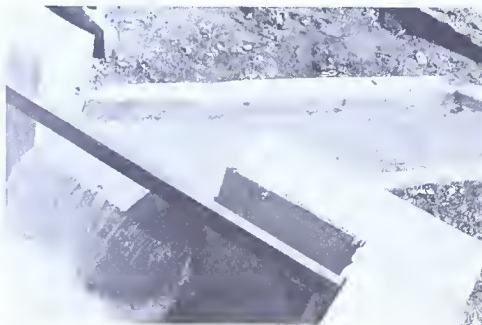
General cures before specific cases might be the order. So aeration aids can be put into three categories: the splash-gravity type, a variety of pumps, and a series of baffles. Variations in the installation of these devices range from a single unit at the

head of a raceway to several units throughout the sections. Their operation may be constant or sporadic, based on need, general water quality, and time of year.

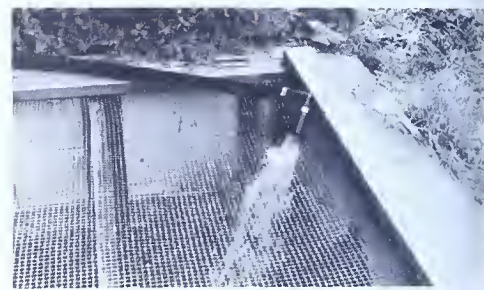
In the gravity category, a wide range of structures is used. A reasonable drop from the intake system into the raceway will aerate effectively. Step type aerators accomplish the same effect with a series of drops instead of a single plunge. A modified version of the step aerator is the table aerator. Resembling, and sometimes called a "Christmas Tree," several concentric wooden tables (with each one smaller than the one below it) are attached to a pipe which runs through the center. Water is pumped up through the center pipe and allowed to cascade down over the "tables." The Windber Sportsmen's Association, Somerset County, have such an arrangement to be used in warm weather. There are other modifications to these basic forms that are used successfully.

Pumps may be employed directly or as part of another system, such as the Windbar table setup. One of the best devices recently adopted by many cooperative nurseries is the "minnow saver", a unit frequently employed on stocking trucks and in batteries by commercial hatcheries facing a severe oxygen or nitrogen problem. The Consolidated Sportsmen of Muncy Creeks, Lycoming County, have added such a device at the head of their Faus Nursery.

Baffles, the third category, are designed to create a turbulent current that produces aeration in the pro-



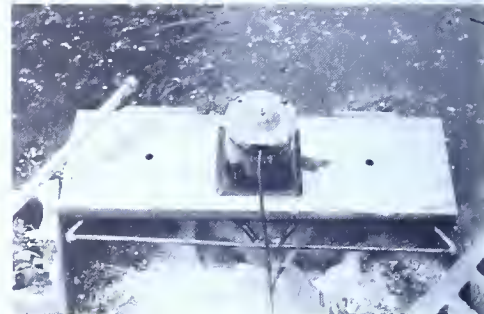
The Fulton County Sportsmen's League Nursery utilizes the splash-gravity system of aeration.



Spraying water through mesh to achieve aeration. An electric pump brings water from an auxiliary spring for the Faus Nursery, Consolidated Sportsmen of Muncy Creek, Lycoming Co.

cess. Stones are set into cement around which the water flows; and a variety of metal plates and planks are used to create a swirling current in an otherwise flat stretch of intake water. Of course, a wide range of variables can be used as long as the oxygen is established. The West End Sportsmen, Snyder County, set electric pole insulators in their intake system to break up the flow and add a little more oxygen.

Now let's take a look at a few specific clubs that have had some trouble over the last few years and how it was resolved. Before doing that, a bit of advice: Bob Brown and



"Minnow-saver" aerator installed at the head of the Faus Nursery.

his staff should be contacted for assistance as soon as a problem is noticed. Now the clubs: The Mercersburg Club, Franklin County, in 1969, purchased and installed four submersible pumps for added aeration during periods of low water. They recently completed a new dam and intake system to further guarantee an adequate water supply.

Excessive nitrogen in 1970 practically wiped out the Faus Nursery, Consolidated Sportsmen of Muncy Creeks, Lycoming County. A "minnow saver" unit was installed and an electric pump was rigged to a nearby spring as a supplemental water supply. This water was splashed through 1/2-inch screening before falling into the upper end of the raceway. The combination worked and presently the nursery is in operation and holding its own.

TAKING A CLOSER LOOK

by Tom Fegely

MEET THE MINNOWS

There's probably not a term in "fish talk" used incorrectly more often than "minnow". Fry and fingerlings of bass, trout and other gamefish are wrongly referred to as minnows because of their size. To further confuse things, names like "butter minnow" and "redfin" are used locally in reference to various species of minnows.

Although it is true that most minnows are small, the carp (the largest member of the minnow clan) frequently attains a weight of 40 pounds or more. The fallfish, also a minnow, is occasionally caught by fly fishermen in trout waters. A fallfish of 18 inches or better will earn a Fish Commission Citation Award.

Minnows are classified by their family features, not by size. Large scales, a deeply forked tail, a centrally-located dorsal fin and teeth in the throat but not in the mouth are the basis for the relationship of the 193 species found in North America.

The life of a minnow is largely sacrificial. Their role is that of a converter of planktonic material into protein. Eaten in abundance by larger fish, they are an extremely important link in the aquatic food chain.

Some Pennsylvania Minnows



The Creek Chub, a favorite of young fishermen, may attain a length of 12 inches.

The familiar Creek Chub is often the first fish caught by young anglers. Other fishermen prize it as bait due to its ability to survive on the hook and in the bait bucket. Referred to occasionally as "horned dace", the chub may reach a foot in length. Since its primary food is insect life, it will often take small artificials. A close cousin, the Hornyhead Chub,



The Fathead Minnow (upper right) is used in state hatcheries as forage food for muskies, bass and northern pike. The Golden Shiner (lower left) is a favorite of ice fishermen.

is also a good baitfish.

Another minnow familiar to youngsters is the Common Shiner or "redfin", the latter name being derived from the red color of its fins at breeding time. Although it may attain a ten inch length, those of six inches or less are good bait and can be readily seined from cool, clear streams. The Golden Shiner is another extensively-propagated bait-minnow, being prized especially by ice fishermen. Breeding from May through June, the Golden Shiner provides a constant supply of forage individuals in the wild. The Emerald Shiner is a resident of larger waters and is especially abundant in Lake Erie, often occurring in large schools at the mouths of tributary streams. Other shiners in our state include the Spottail, Blacknose and Blackchin shiners. The term "pond shiner" and "butter minnow" are frequently used in reference to the Golden Shiner.

A popular streamer is modeled and named after the Blacknose Dace. The dark line extending from the nose to the tail readily identifies this small inhabitant of trout waters throughout the state. It is commonly used as trout bait. Spawning occurs in the riffles during May at which time the fins take on a reddish hue and the black line gets a red border. Other daces used for trout and sometimes for bass include the Finescale and Longnose Daces and the beautifully-marked Northern Redbelly and Red-side Daces.

The Fathead Minnow is probably the easiest minnow to propagate and obtain in bait shops. A million or more can be raised in an acre of

water. The female spawns as many as a dozen times per season. They feed on algae and insects in slow moving streams. Other relatives are the Cutlips and Bluntnose Minnows.

Another statewide minnow is the Stoneroller, also known as "horny-head". Its names are derived from the way it builds its nest by clearing a depression in gravel and by the numerous "horns" it develops on its head and back at breeding time. Due to its heavy lip structure, the Stoneroller is extremely active and hardy on a hook, making it a desirable bait.

The "Monster" Minnows

The best-known minnow is probably the carp although few realize that it is indeed a minnow. Introduced into the United States from Germany about a hundred years ago, carp prefer waters with an abundance of organic matter. Known as the pigs of the fish world, they have a reputation for uprooting vegetation and muddying the bottom in search of food. Besides providing sport in waters unsuitable for other gamefish species, a 30 pound carp will provide plenty of excitement when hooked.

Often called "chub" because of the similarity to its smaller cousin, the Fallfish is a resident of clear streams and lakes. Its name is derived from



The Fallfish, Pennsylvania's second largest minnow, is frequently caught by fly fishermen in trout waters. Here Bob Labdik of Center Valley hoists a hefty 16 incher.

the waterfalls at the base of which it is frequently found. During spawning time the Fallfish takes on a reddish tint and the male carries stones in its mouth to cover the nest. They are usually caught in trout waters and they can be taken with flies—giving a good account of themselves.

Anyone wanting to learn more about Pennsylvania's interesting minnow family should secure a copy of "Pennsylvania Fishes." Featured are 20 full color plates of minnows plus another 27 Ned Smith illustrations of all the fish it is possible to meet within the waters of the Keystone State.



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Toeks Island Dam

The citizens of Monroe County were given a chance to register their opinions on the Toeks Island Dam during the April Primary when they voted Yes—1,633—No—3,154 on the Question, "Should the Toeks Island Dam be constructed?" A number of other counties are apparently moving to put the same question on the ballot in November.

The project seems to move on like a relentless force in spite of intelligent, responsible questions that were raised over the past several years about the benefits of this project versus its costs. Certainly the Corps of Engineers is following the mandates of the Congress in continuing with the project, but there are many questionable answers and there are many questions unanswered.

The Pennsylvania Fish Commission was asked in a meeting in early May to generally approve perimeters for design of fishways, but none of these plans included the affects on those fishways of the construction and operation of a pumped storage facility even though that facility is being planned. The engineers were not mandated to study that and even though they understand the probabilities that pumped storage will be part of the project, the Fish Commission had to go through the motions of studying fishway plans that will probably never be used.

The Pennsylvania Fish Commission has opposed the Toeks Island Dam even though the Delaware River Basin Commission, of which Pennsylvania is a signatory member, is banking on the Toeks Island Dam for a number of reasons. The Fish Commission is opposed to the dam for the following reasons:

1. Loss or severe reduction of the run of American shad.
2. Irreplaceable loss of 37 miles of highly productive fishing and recreation waters.
3. Formation of a fluctuating pool of far lesser fishery value than the existing river area to be flooded and even that will be subject to water supply and power demands to the detriment of the recreational and fishery interests.
4. Degradation and possibly the complete loss of the natural river fishery for from one to twenty miles below the dam.
5. Possible loss to Pennsylvania of resident fishery use of any fishery (probably trout) that develops in the tailrace of the dam. (The tailrace will be located in New Jersey).
6. The high potential for a continuing and significant loss of fish from the reservoir through pumped storage intakes.
7. We can expect the need for development of an expensive hatchery system to provide a continuing supply of game fish to support the natural production of such fish in the reservoir.
8. The extensive plans for expanded levels of water supply to the down river area will be removing clean water from the river and estuary system that will either not be returned because of evaporation losses or other consumptive losses or will be returned to the estuary as treated sanitary or industrial waste.

It is interesting that the Corps plan includes the recommendations of a consultant with the requirements of from 95% to 98% nutrient removal from all of the wastes above the dam, a prospect that has only been effected in test tubes to date and if implemented on a regional scale in the basin will cost 362 million dollars to start with.

In short, I suggest that the Toeks Island Dam Project creates more problems than it solves, that it is another project using resources indigent to Pennsylvania for the benefit of other states and municipalities, that the long range planning of the Delaware River Basin Commission should be re-examined with the thought in mind that the needs of the people within the watershed come first, that the needs of the people of New Jersey who have no other source of water supply comes second, and that the desires of New York City to maintain a water supply system requiring no filtration must take last place.



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STATEWIDE with the EDITOR

THIS MONTH'S COVER, by teacher/writer/photographer TOM FEGELY brings back memories of many boyhood days on SPRING LAKE in BRADFORD COUNTY. Bluegills and largemouth bass were fairly abundant at the time and many summers were spent in half-hearted pursuit of them. Fishing was good, but there always seemed to be so much more to do, or should I say *observe*. It was there that I learned the reward of sitting motionless . . . instead of disturbing nature, I became a part of it. As a result, I met my first BEAVER. He swam past my boat apparently convinced that I was a part of those dead snags and floating logs that cluttered the "backwaters" . . . or else I posed no threat since he was at least half as big as I was. I watched MUSKRATS at work; noted the contrast between the tranquility that seemed to prevail in the TURTLE community and the nervous excitement that was the lot of the RED-WING BLACKBIRD; and I literally spent hours studying the dragonfly "close-up."

Tom's photo was taken on Lake Jamie in Pike County, and is so typical of Pennsylvania's largemouth waters. You'll want to read Tom's BLUEPRINT FOR BIGMOUTHS on page 6.

BACK IN my law enforcement days, I had the opportunity, now and then, to witness the tossing of a bottle into one of Luzerne County's lakes or streams and the prosecution which always followed gave me the feeling that perhaps I had prevented the cutting of some expensive waders or hip boots. Oddly enough, many times the litterbug himself was a fisherman and as often as not all decked out in costly wading attire. It would seem only natural that if he cared nothing for others, he would have given some thought to the possibility of returning to the area himself—and suffering the consequences!

Maybe a childhood memory was more responsible for some of the disgust I held for the litterbug.

While fishing with my parents at what is now the HOOVERS ISLAND access area, I stepped on the upturned half of a broken mason jar and needless to say, I bled like the proverbial stuck pig from a gash across the entire width of my foot. A fisherman coming in off the Susquehanna took me aboard his motorboat and up Penns Creek to his cottage. A peroxide bath and some bandages later, I was hobbling along.

Unfortunately, many have shared this same frightening and painful experience but I believe the Editor's "Inconsiderate Of The Year" award goes to the picnicker who dumped live coals from his charcoal grill into a grassy area along one of the swimming beaches on Harveys Lake. A six year old came running along unsuspectingly—and PAINFULLY, through the pile! His pain and suffering must have been unbearable.

SOME TIME AGO, Frank Rotchford, our Waterways Patrolman down in Montgomery County capitalized on some of the fervor that accompanies the stocking of fish. Rounding up some concerned sportsmen and Boy Scouts, and enlisting the aid of Game Protector Harry Nolf and Joe Budd, Superintendent of the Eastern Game Farm (he supplied the truck and a good bit of elbow grease,) Frank instituted an "ANTI-LITTER" patrol. As the Unami Creek was stocked with



trout, volunteers fanned out in all directions armed with litter bags and the streamside was "vacuumed" of its trash in short order. Beautiful!! But, the best is yet to come. Repeating the



patrol on each succeeding stocking, Frank reports that the litter has dwindled to a mere handful! This should prove something—A CLEAN AREA IS LESS LIKELY TO BE LITTERED!! Why not give it a try.



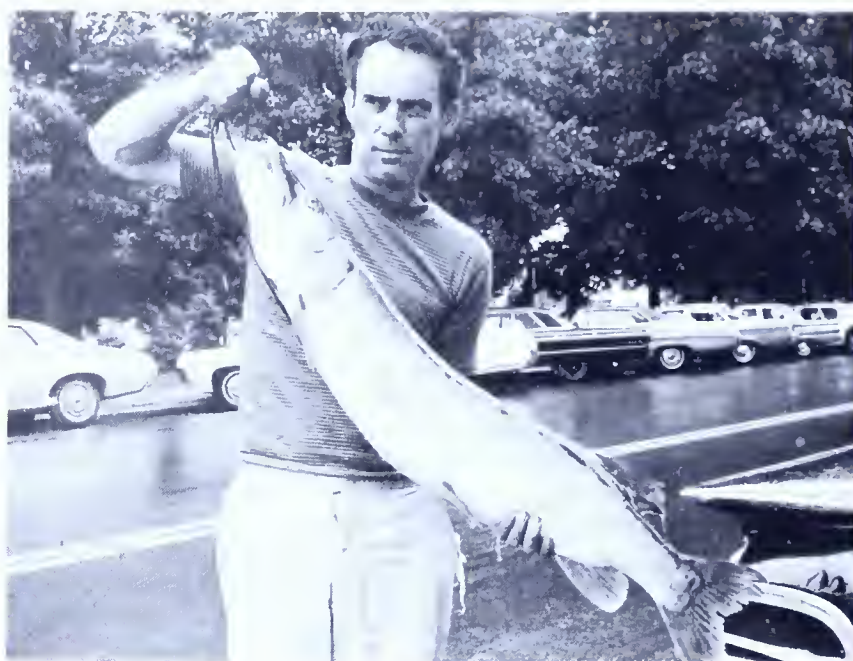
TIM COLEMAN'S "After-Six Carp" tale on page 14 got me to thinking about how relatively few people eat carp. But, walk into the deli section of your supermarket and you'll find them bringing 69¢ or more a pound. Of course most of us are so smug we wouldn't be found dead eating carp . . . but we'll buy whiting, perch, cod, or haddock which is on special this week for 49¢! I have a feeling that we're not getting the picture.

In talking to Norm Sickles the other day, he volunteered a few recipes from Walter E. Bickel up Franklin way.

PREPARING AND COOKING CARP. Clean carp and place in salt water, 1 cup salt to 5 quarts water, add ¼ cup vinegar. Let stand 24 to 30 hours or more. Then boil slow in skim milk till the bones come loose. Take out of the milk and drain. When cold, butter and pat on "shake and bake." Then bake or fry in an open skillet.

A good "shake and bake" for fish: ¾ bread crumbs dried and rolled fine to ¼ corn flakes rolled fine with enough flour to hold them together, will make a good fish shake and bake. The corn flavor makes any fish better. Carp can be prepared with tomato sauce and a little cotton seed oil. Break up the fish after they come out of the milk then serve hot or cold with sauce, like sardines.

Traditionally, a fishing "hot spot" has always been a remote, seldom seen Shangri-La type location . . . many miles from home, and known only by the "natives." Ed Crumlich, right, fishes the Susquehanna about a mile below the State Capitol in the shadow of Steelton's steel mills with a jet airport on each shore and has blown that theory to bits 99 times with muskys alone!



Writing about fishing hot spots gets to be a ticklish subject at times. Fishermen who have put in lots of time and effort into really learning an area and *how* and *when* to fish it are reluctant to divulge any of their hard earned knowledge. You can't blame them either. Imagine yourself finding out where a huge fish is located, you tell a few friends about it and the next time you get out after him, you find a dozen other fishermen there after your prize!

Over the last few years the popularity of musky fishing in Pennsylvania has increased by leaps and bounds. There have been lots of places that have gotten reputations as top musky waters in that short time. One of these is that section of the Susquehanna River between the Rte. 83 or South bridge down to the turnpike or Highspire Bridge.

This section is about 6 miles long and is dotted with numerous islands. It is criss-crossed with limestone rock ledges, causing numerous drop-offs, deep spots and channels . . . ideal musky habitat. The populations of forage fish—suckers, fallfish, rock bass, minnows and catfish are almost unbelievable. The tremendous improvement in water quality over the last 20 years has seen the resurgence of the crayfish population in the Susquehanna.

Ed Crumlich, Camp Hill barber fished this section of the river for years and concentrated on small-mouth bass and walleyes. Back in 1965 he took his first musky, from the river, a 41" down at Falmouth. Until now, he's landed 99 legal muskys, and he's looking forward to Number 100 to have mounted. Being a barber, he doesn't get much time for fishing, one hour or so before the shop opens or an hour or two after it closes. Not all his time is spent on muskys either. He still likes small-mouth, walleye and rock bass, and practices these types of fishing faithfully. Ed's knowledge of that section of the Susquehanna is probably unmatched by anyone. In 1971, Ed had five spots located that he knew to be musky hangouts. During the year he caught 7 legal muskys out of these holes. He concentrates on water levels, water clarity, temperatures and times of day—and fishes accordingly. He is a great believer in having lures of different sizes handy so that he can quickly switch these when he feels the need. He varies his speed of retrieve too when he feels water and weather conditions call for it. Ed uses a spinning outfit with 10 pound test line, a limber rod and no swivels or wire leader with his lures, although when fishing bait, he will use a short wire leader.

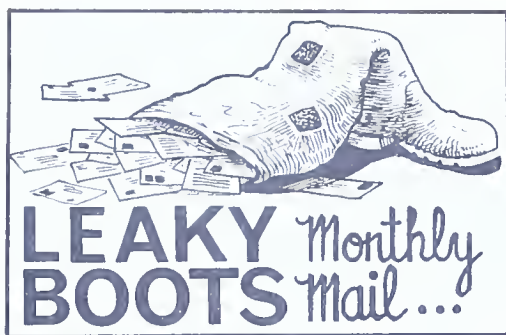
Ira Bowman 68 years young of Steelton has been fishing this section of the river for 60 years and in that time some of his catches, if published, would have broken records. He too fishes according to clearness of the water and depth. His favorite bait is the crayfish and he likes big ones! Soft shells are best in season but when they are not in he takes hard shells and peels the tail and pulls the big pincers off. Ira fishes the west shore mostly, and likes the stretch from the shelf at Hawk Rock down to Newmarket. He had 5 muskys in forty-five minutes last year . . . *but not one of legal size.* Ira feels fishing is best when water levels are at 3.5 feet, rising slowly, and slightly discolored.

Access to the river here is difficult for boat fishermen. There is a ramp at the New Cumberland Boat Club where you can put in and the Highspire Boat Club has a ramp (for members only.) Shore fishing and wading offers access to the river here. The river bottom is slippery though and there are many drop offs. Small-mouth Bass in good numbers and sizes are found throughout this stretch and will be legal game on the 17th of June. Rock Bass, fallfish, and eels likewise offer good sport here. Walleyes are spotty, but when one is caught, it's usually a good one.



FISHING OUTLOOK

By-- Stan Paulakovich



SATISFACTION

It was our good fortune, here in the ANGLER office, to "intercept" the letter printed below. Ed.

Mr. Robert J. Perry
3819 Old Berwick Road
Bloomsburg, Pa.

Dear Sir;

About a year and a half ago, I read an article in the PENNSYLVANIA ANGLER authored by you which concerned the fall walleye run in the Susquehanna River near Sunbury. I have been fishing for thirty-five years and reading all sorts of articles on fishing for thirty years. I learned a long time ago that the majority of these articles were written years before publication, some were merely "come-ons" promoted by local businessmen and/or Chambers of Commerce, while others were no more than a figment of someone's runaway imagination. Not so with your article.

I want to take this opportunity to offer my belated congratulations to you on your article. A friend and I, both complete strangers to the Sunbury area, took a week-end trip there last fall, and following your suggestions on where to fish and what to use, had a most enjoyable time. We were more than pleased with the fish we caught although it wasn't even close to the legal limit. Although we kept no fish, they were there as you said; they took our jigs in the colors you had suggested. We fished across the river from a power plant whose name I cannot now recall. We saw quite a few good-sized walleyes taken by other fishermen, too. Most were as nice or nicer than those we get on our expensive Canadian fishing trips.

We hope to visit the Sunbury area again when walleye season opens on May 6th, the Good Lord willing, of course. We would be more than grateful for any information you could supply us which may make our trip more successful.

In closing, may I once again comment on your article; I do believe it

is perhaps the most accurate I have ever read in any magazine; no misrepresentations, no false information, and well written in a precise manner. Quite a rarity in this day and age. For this alone, a sincere thank you.

Perhaps someday I may be granted the opportunity to meet you personally.

Best wishes for good fishing,
JOHN R. WEYMERS, Coalport

DENIS IS CORRECT!

I am only 11 years old and I have something to say about one of the letters in the December, 1971 issue. A man by the name of L. W. Pratt of Scranton wrote in about making laws for a limit of three trout for kids under 16. He saw it done in Iowa and he wants it done in Pennsylvania too. I am writing in about it.

We have the same rights to a stream just as elders. Some of the older people trespass, leave garbage from cans, paper bags, etc. On top of that they even leave nice trout on the bank to rot.

I myself have been fishing for eight years and I know all the tricks in the book. So if he wants it that way, why doesn't he move out there?

DENIS E. SNYDER, JR., Tyrone

You tell him, Denis! Good sportsmanship isn't limited to adults—far from it! Ed.

(and for you smart alegs out there, Denis spells it with one "n")

A HUNGRY ANGLER

In reply to "Recipes Please" way back in your August 1971 issue.

He did not mention the conditions to prepare panfish; is it at home or outdoors? Perhaps this might help him or others. Let's say, we're fishing outdoors for a weekend. Food is a prime concern not only eating, but where, and how much. If you're going to fish, you don't want to waste time running around, to end up perhaps in some greasy spoon and have heartburn all day.

I "love" to eat fresh caught fish from unpolluted waters. Here is my weekend setup: A portable one-hand carrying kitchen with food and utensils plus stove:

1. A small camp stove, cost today about \$10.99.
2. Extra stove fuel. Six inch stiff wire, for stove fuel jet cleaner. A one quart flat can, screwtop, painted red and marked "fuel".

3. In case of rain, a stove shield is necessary, especially on windy days. This consists of four aluminum brass hinged sides (riveted). Square enough, when opened around stove, to allow size frying pan, and soup pot to stand on stove. Stove, by the way, must stand level when in place for cooking. This shield folds into one piece for compact storage.
4. Frypan, and soup pot, is stored on outside of kitchen box, to save on space, and weight on wood box compartments.
5. Utensils—Metal spoons, forks, peeling knives, can opener, one good sized regular butcher flay knife, and small touch up oil stone, plastic soup cups, paper plates, clean up paper towels, or cloth wiping towels and soap brillo cleaning pads. One pair of teetted jawed pliers. One pair of "sharp" tailor cloth scissors. What for?—small panfish—I use no fish scaler. I hold fish under the gills with one hand with the other I "scissor cut" the back of the fish to it's flesh after I first cut the tail off. Then I "scissor" the fish head off. Then through the fish's rib cage, cutting the whole "boiler room" out. Then I cut small sections of the fish's bottom edge, leading from abdomen to tail. With pliers, from head section, pull skin with scales from fish. Once you get the hang of it you can clean a large bluegill in one minute, or less.
6. Now back to the kitchen box. For food, depending on how many are in the party, this will determine the size of the box. 8 fresh potatoes, (for two guys). 8 onions, or more. 6 cans of soup, with one quart of water contained in a clear flat plastic screw top water bottle. Dehydrated foods and soups can be used. But you carry more water, so the choice is yours. 6 teabags, or a small jar of dry coffee, 1 small loaf of bread, or crackers, and 1 small jar of dry milk. Silver Foil to keep food warm, on "hold", as fish are frying—home fries, onions. 1 pint of cooking oil, in a clear marked plastic bottle, and a screw top. Salt and pepper shaker. 3 clear plastic bags containing one pint of flour with plenty of salt and pepper mixed for shaking clean fish before frying.

In frying pan cover with 1/4" to 3/8" oil. Slice some onions on top of

fish as they are slowly frying. Here's where you need a spatula to turn fish over. In case you forget, two forked cleaned branches are good enough. Be sure you don't use ivy poison or sumac branches.

If you go for this, a kitchen box built like a book with compartments is your best bet, for serviceability.

After you are through, use your plastic flour bags as trash bags, and take your trash to the nearest disposal can, or better, take it home with you.

AL ZIMBA, Philadelphia, Pa.

Al, who do you think you're kidding? You don't go to FISH . . . you go to EAT! Oh how I'd love to go along!! Ed.

HERE'S A NEW SWITCH!

Enclosed is my renewal for the Angler. Your magazine is the best publication going for the all-around fisherman, and I enjoy it very much. Keep up the good work!

I would very much like to see more articles on carp fishing. Living in a large city like Pittsburgh and having a pretty busy schedule, there are five or six of us who are able to go fishing every Friday night for five or six hours for these "muscle bound" gold fish, since our "Allegheny" is only 10 minutes away. The action is great and the sheer power of these fish is unbelievable. For anyone who likes to fish just for the fun and action, the answer is carp fishing. These fish are abundant most everywhere.

In 1970, I kept a chart on my carp fishing and here are some of the figures. I caught a total of 291 fish from May to October. Of these 53 were catfish and 238 were carp which weighed 687 pounds. This makes the average weight of the carp almost three pounds. Of course there are smaller ones, but I also caught a 15¾ lbs., 12½ lbs., and 12 lbs.

Although I do some bass and walleye fishing my real hang up is carp fishing. It's great for anyone anywhere who doesn't get much time to get away to the game fishing hot spots. It's also perfect for dad and young son since the youngster doesn't get much chance to get bored. My 10 year old son catches carp he can't even bring in himself.

For all "FISH FOR FUN FISHERMEN," Carp Fishing is the answer!

KARL A. SCHMIDT, Pittsburgh

Just for you Karl, we're running Tim Coleman's "After-Six Carp" on page 14. He's got a totally new slant—using light

tackle, and apparently goes along with your idea of fishing for FUN. Just checked the local Deli case and with carp bringing 69¢ a pound, I figured those 687 pounds were worth \$474.03. Allowing you the \$5.20 you paid for your license, I figure you owe us \$468.83 for 1970! We'll discuss your 1971 exploits at some other time. Ed.

FOR THE ASKING

I live only 17 miles from Philadelphia, and three years ago figured my fishing days were about over because of this new location. But thanks to PENNSYLVANIA ANGLER I heard about *farm ponds*. I was really amazed to find that farm ponds were numerous in the area (although you must look hard). Anyway I have my favorite farm ponds and the people who own them welcome me. It seems I'm the only one that uses them.

Well, to make a long story short, in the past two summers I have landed and released six bass over 16 inches (up to 3½ pounds) and hundreds from 12 to 14 inches. All bass were caught on artificials—both lures and flies. The latter quite a thrill, since I'm new at fly fishing, but *what a way to learn!*

All pond owners have their rules but I've found them to be reasonable. Many don't want you to take the bass out or limit it to one or two. Others insist you take all the bluegills (I've caught them up to 11 inches) that you hook.

Next time you pass a small pond stop and ask. It might be the start of a new fishing career.

JOHN R. PERRY, 3RD, Horsham

John, until I heard from you and Karl Schmidt, Pittsburgh, I was content to live within ¼ mile of a good trout stream (which runs another 20 miles or so through State Game Lands)—and just about 4 miles from the bass and musky "infested" Susquehanna River! Now, I'm not sure. The two of you are catching far more fish than I am! Ed.

WANTS MORE BASS

I would like to congratulate Clair Schofield of Easton, Pa. on his suggestion. "Keeping all fishing seasons open the year around and the minimum 12 inch on all bass."

After all, what do you have on a 9 inch bass when dressed out? It has been proven in all states that have no closed season especially on bass that there are more and larger bass caught

than in most of our inland waters.

The Pymatuning, a boundary water proves that there are more large bass taken annually than most any of our inland waters. Ohio, is coming up with more and I do mean more bass in the 6 and 7½ pound bass every year than the Pennsylvania anglers do. I have fished Pennsylvania waters for over fifty years and since the artificial propagation of walleye and muskellunge began, especially in the Crawford County area the Pennsylvania Fish Commission has not stocked bass since approximately 1964. We used to receive smallmouth bass from Lake Erie but no more.

The big bass that we are all interested in for the take home are very seldom caught—only by some poachers fishing for pan fish. They are off to the "who-knows-where" when June comes around.

I think it is time the Pennsylvania Fish Commission starts to modernize. Most of the propagation is on trout, walleye and musky. While all these fish are enjoyable to catch there are many more people that like to fish for bass.

In other words, when the fishing is at the peak for walleye, muskellunge or trout the season is not closed. This is more than you can say for the bass season. And that is just about what it sums up to, closed season on bass when the season is at its peak.

JOSEPH WISHART, Linesville

I would like to offer a few comments on Mr. Wishart's suggestion that the Pennsylvania Fish Commission remove the season and increase the size limit on bass as some states did a number of years ago.

We admit a 9" or 10" largemouth is no trophy, but this fish could be a mature male—necessary in spawning and incubation. Unlike the walleye and musky, which exhibit no parental care of eggs or fry, the male bass has the responsibility of cleaning and caring for the nest and eggs and guarding the fry. During this time he would be very vulnerable to the fisherman's lure. It is our belief that bass can, under favorable conditions, propagate successfully, but need protection to maintain a healthy population. Many states have reversed their liberal stand of a few years ago on regulations due to increasing fishing pressure.

The Pennsylvania Fish Commission annually stocks approximately 100,000 bass fingerling, primarily in new impoundments, reclaimed waters or rehabilitated rivers and streams. At this time we cannot

continued on page 29

BLUEPRINT FOR

If it's true that 10 percent of the fishermen catch 90 percent of the fish, then it also must be true that these fishermen have some special knowledge about the waters they fish. On most good bass lakes throughout Pennsylvania, there are those few "experts" who concentrate on one particular lake and fish it day after day. I envy these "bassmasters," both for their fishing ability and the frequency of their days afloat.

Unfortunately, I live about 80 miles from the heart of good largemouth country and consequently must limit my angling to weekends. Even though I usually end up at one favorite lake, I also like to sample new waters from time to time. Since there's no secret formula for assuring success on every lake or pond, learning a few basics about the haunts of "Mr. Bigmouth" will assure some action—no matter *where* you fish.

There are three factors that influence the location of any fish—FOOD, COVER and COMFORTABLE CONDITIONS.

Good cover attracts small fish and also bigger ones that feed on them. Largemouth bass are attracted by weeds, logs and lily pads that offer protection from danger and the sun's rays. Bass feed intermittently; they prey upon crustaceans, insects, small fishes and practically anything else from frogs to ducklings. Largemouth bass, however, need not be hungry to strike. A good food-producing area is usually a place



Canoes are often necessary to penetrate the "forests" . . .

that has good protection. During the early part of the season, when water temperatures in the shallows are still in the 65-75 degree range, bass will spend time on the bottom near a weed bed or under a sunken log. Later in the season most lunkers will have moved to deeper water to maintain their 70 degree comfort range. Even so, they'll move into the shallows to feed on a regular basis.

"READING" A POND OR LAKE

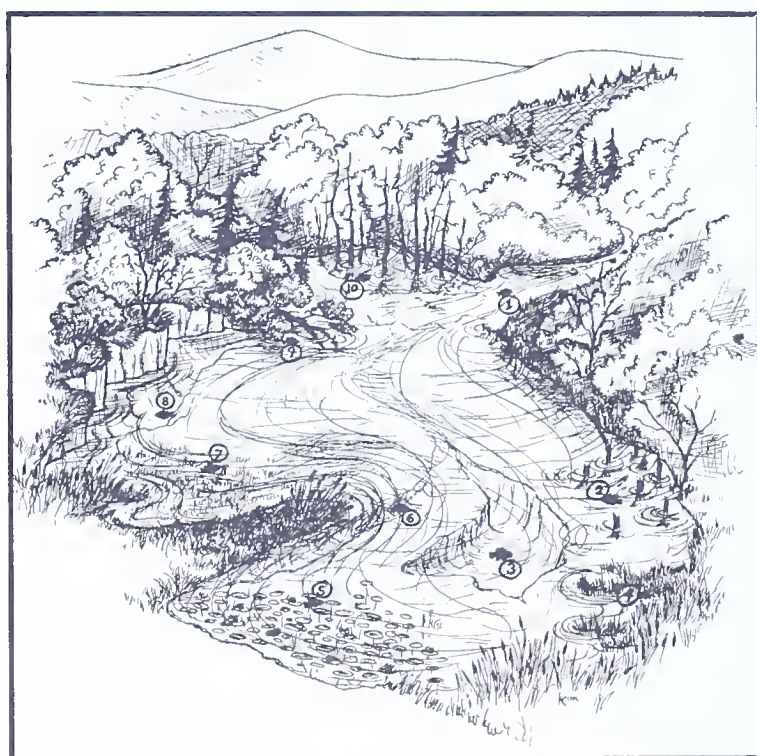
When a pond should be called a lake (or visa versa) depends largely upon the person who named it! Since both share similar conditions, they can be read in the same manner.

The diagram (Fig. 1.) below, left, is of an idealized body of water. Few lakes will have all of the structures shown, although every Pennsylvania lake or reservoir will have some of them. Lakes are different, but bass are the same all over. If you have luck on one lake near or in a particular structure, find something similar when you hit a new body of water and fish it the same way.

Here are some structures to look for if you are on unfamiliar waters or largemouth fishing for the first time. Don't concentrate on one spot for too long a time if business is slow. Move on to another spot and come back later in the day if things look promising. **Inlet Stream (1)** This is a good spot to fish when the mixture of the stream and lake waters produces a 65-75 degree temperature range. Food is also plentiful here. Fish the drop-off below the rapids where bass can rest without bucking the current.

Submerged Logs and Stumps (2) Hit this area with poppers and surface lures. Don't retrieve too soon. Instead, allow the motionless lure to rest a moment or two, then twitch it in. Get in as close to your tar-

Figure 1.



BIGMOUTHS

by
Tom
Fegely



too wide to navigate the backwaters.

depths along the cliff.

Overhanging Brush and Trees (9) I like to fish these areas at dusk when the water is mirror calm. Bass will occasionally lay here in mid-day because of the shade and protection offered by the brush.

Standing Timber (10) First fish the outer edge of the timber and, if that isn't productive, move in. A canoe is often necessary to penetrate the "forest" and hit all the open spots. Casting may be difficult and you'll get hung up above as well as below. I fish noisy surface plugs here at times and may later switch to a plastic worm or jig. (Choice of lures here depends on how often underwater debris fouls your line.) When you hook onto a largemouth in the timber, get him in as soon as you can or he'll dive and wrap the line in submerged branches.

Largemouth bass aren't the only fish you'll find in these structures and chances are you'll come up with an occasional northern, walleye or pickerel.

Nothing beats experience when it comes to "lucking out" on largemouths. After fishing all the likely structures in a lake, you'll soon discover your own favorite spots and concentrate on them. Then you'll be able to work out the finer points of matching the lure or bait and technique with the structure you're fishing. But even the best bait and method of presenting it is worthless unless you first find the fish. That's what "READING THE LAKE" is all about.

Charlie Heidecker hauls a 23 inch lunker from the weeds. It fell for a rubber snagproof frog.



get as possible without getting hung up. Here's where casting practice pays off.

Deep Hole or Creek Bed Channel (3) If the pond or lake has been raised by a dam, chances are that a deeper channel extends out into the water. In shallow lakes a deep hole may hold a concentration of largemouths during extremely hot weather. Fish the lake from the inlet on out to mid-lake. Go down deep with a plastic worm, sinking plug or your own sub-surface favorite.

Reeds, Rushes and Shrubs (4) Try to get into the "pockets" and patches of open water with your lure. Coarse rubble from dead vegetation breeds aquatic insects and crustaceans. Bass will move in and out for both food and cover.

Lily Pads and Spatterdock (5) Use a rubber snagproof frog and cast into the pads or hit the edge with a surface lure. Here's where largemouth will look for frogs and small fishes. Water depth will often run to eight feet or more along this edge. Often a bass will follow a lure right up to the boat before striking. Don't give up too soon.

Drop-Offs (6) This is where bass will pause in their periodic movements from deep to shallow water and back. A point on land will usually extend underwater as a bar for some distance. Fish along this bar. If the lake is a large one, its contour will be outlined on a regional topographic map. Study it and fish the spots shown by the closely spaced contour lines.

Weed-Infested Shallows (7) These spots are good in early season and then again in late fall. Bass will move into these shallows to feed and then return to the nearest drop-off to rest. Hit the edge of these weeds or try casting in using a weedless spoon.

Steep Cliffs (8) This indicates deep water near shore. Rising surface temperature will push bass in to the

Let's Buy A BOAT

by George S. Morrison



Let's buy a boat: With these words spoken one early spring evening to my wife, it all began! I had been thinking during the previous months about the advantages a boat would provide my son George and I in getting to the crappie and bass hot spots on Edinboro Lake. Situated in the town of Edinboro, in northwestern Pennsylvania, it is a lovely lake which offers the fisherman panfish, bass and muskellunge. In addition, the town and lake are a favorite recreation and resort spot for many Western Pennsylvanians. It is particularly popular with vacationers from the Pittsburgh area.

"What kind of boat do you want to buy?" my wife asked.

"A fishing boat, naturally," I replied.

"What kind of fishing boat?"

"I was thinking about a small fiberglass boat that we could put on top of the car. We live less than five minutes from the lake, and I'd like to get in as much fishing this summer as possible."

By this time, our children, Laura, 15; Pat, 13; and George, 10, had become interested in the conversation.

"Are we really going to get a boat?" George asked.

"Well, I'd like to. Let's think about it and see what we can come up with. There are a lot of things we have to find out before we make a definite decision."

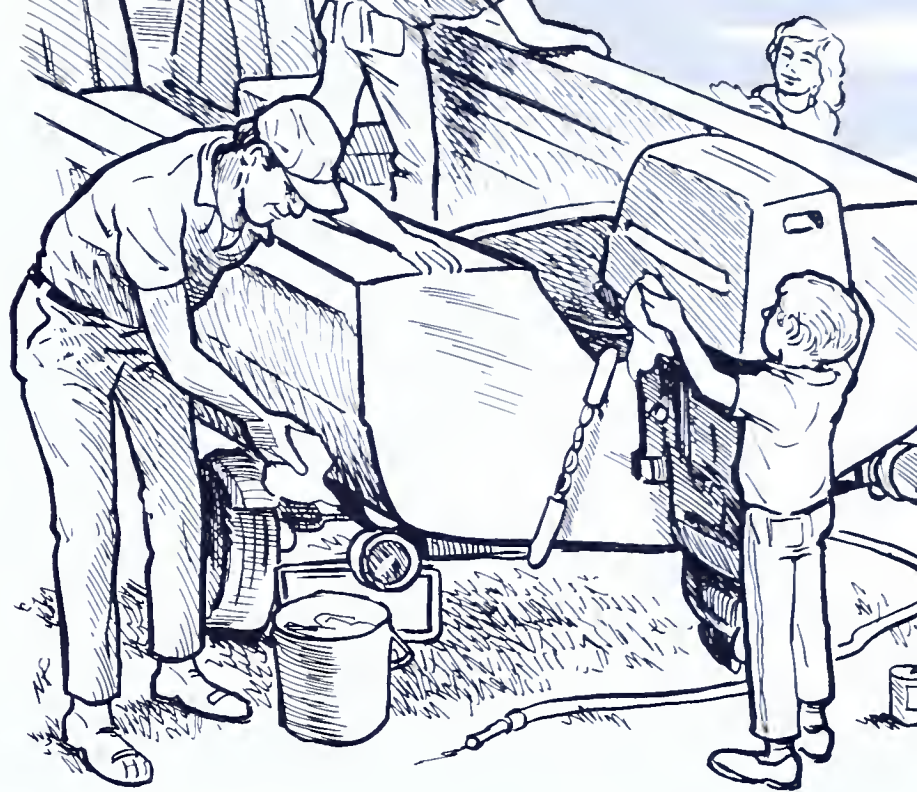
It was then that I started to find out more about a fishing boat. One of the first things I learned and rather quickly, was that I really didn't know much about boats at all. It was a real shock to learn that a boat—any kind of a boat—was going to cost more money than I expected. I suppose that to some extent this is natural when buying something you have never purchased before. It certainly was true with me and buying a boat.

Another thing that I learned rather quickly was that there were a lot more boats, motors and accessories to choose from than I had ever expected. This really impressed upon me the need to gather all of the information about boats I could by reading and talking to people. As far as finding information about boats by reading—I don't think that I can emphasize enough the importance of the local library in this respect. It usually has books, journals and periodicals on boating which are tremendously help-

ful. This is also true after the purchase of the boat, for books on water safety, navigation and transporting the boat are all topics which you need to know extremely well. Even if you have to drive some distance to a library, it is an afternoon well spent. Also, in collecting information about the kind of boat you want to buy, there is no substitute for talking to people who already own a boat. I don't know why it is, but oftentimes we feel that we have to become experts in a subject all by ourselves. We somehow feel that it is wrong or embarrassing to ask people for advice about the purchase of something. But there are many decisions, related to boat buying, with which help is needed. For example, one of the decisions I was faced with was whether to buy an *aluminum* or a *fiberglass* fishing boat. I felt that the best thing to do was to talk to people who had each kind, and preferably someone who had owned both. Fortunately I was able to do this. From this kind of information gathering I was able to make what I feel was a wise decision (but then, aren't most decisions wise ones?).

Another decision that had to be made was whether or not to buy a new or used outfit. After talking to a lot of people and looking at many boats, I decided to purchase a new outfit, simply because I felt I didn't know enough about boats or motors to make a good decision on a used outfit. Also, I found rather quickly—and this is just my impression—that boats and motors which are well cared for have a low depreciation rate. I felt that if I took care of a new outfit, I wouldn't lose that much money on it.

After looking at many different boats and talking to many people, I finally decided on a 14 foot fiberglass fishing boat with a 5½ horsepower engine. Visions of landing record-breaking bass on as yet untried waters—such as Pymatuning, raced through my mind. Now the only thing that stood between me and long hours of blissful fishing was the cash settlement.



Happily, I took my wife to the dealer from whom I was going to purchase the boat in order that she might have a look at it before we bought.

"Can you waterski with this kind of boat?" was her first reaction.

"I'm not sure—but I don't think so. You need a more powerful engine."

"This type of boat isn't too safe, is it? I'll bet it would be easily upset by the first big wave that came along. It looks awfully small to me."

"Well, I don't know. I never really thought about that. I'm sure it's perfectly safe. After all, I do expect to practice good boating safety."

"Couldn't you fish from a bigger boat? You would have more room in it."

"Yes, I suppose we could."

"Why don't we buy a bigger boat, one the whole family can enjoy? I'd feel much safer about you fishing from a bigger boat. Besides, with a bigger boat we could waterski, and all of us, as a family, could go out on the water at one time."

Needless to say, the children—the girls in particular—were impressed by this suggestion. They had not been very impressed anyway with the idea of having a boat with which they could not waterski. And I must admit that the idea of getting a boat which the whole family could use made sense to me.

So the search began again for a boat. Only now there were a couple of differences. One of these was that this time all of us—the whole family—started looking at boats. The other difference was that while I didn't know much about the larger boats, at least this time I knew more than I did before.

However, we were also looking for a completely different kind of boat, one large enough for a minimum of five people. This meant that some of the smaller boats were automatically eliminated. Because of this,

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A Fly for All Summer

by Charles R. Meck

A new fly pattern used on many Eastern and Midwestern streams will prove effective all summer.

The American March Brown May fly emerges around the third week in May and is present on most waters

for the next few weeks; similarly, the Ginger Quill emerges towards the end of May and is present until the end of June. Imitations of either of these May flies is especially effective during emergence time. Most May

fly species follow this pattern annually emerging for a few weeks out of the year.

One May fly, however, the Slate Drake, begins emerging around June 1 and continues to emerge sporadically for the next four months. Yes, the next four months. Therefore, if artificials imitating the March Brown and Ginger Quill are effective in late May and June, an artificial imitating the Slate Drake should be "a fly for all Summer."

However, present imitations of the Slate Drake or *Isonychia bicolor* are few and those existing don't closely imitate the species.

The pattern most fly fishermen use when a hatch of "bicolors" is on is the Leadwing Coachman or the Dun Variant. Let's look at the Coachman versus the natural:

Leadwing Coachman

Tail—None
Body—Peacock
Wings—Gray quill
Hackle—Brown

Isonychia bicolor

Tail—Medium gray
Body—Dark slate colored
Wings—Dark slate
Legs—Front dark brown, rear cream

Schweibert, in his classic *Matching the Hatch*, has suggested that the Leadwing Coachman is not a close enough imitation during hatches of the Slate Drake. Perplexed by the need for a closer imitation but frustrated by the lack of a more realistic pattern, I worked on an artificial and dubbed it the Slate Drake after the nomenclature from Donald DuBois's comprehensive book, *The Fisherman's Handbook of Trout Flies*. I attempted to make the artificial as lifelike as possible by using medium gray hackle fibers for the tail, striped peacock quill for the body, dark gray mallard quill for wings, and one cream hackle in the rear and one dark brown in the front for the hackle.

How effective is the Slate Drake as an artificial? I tied about a dozen of the new imitations and put them in my "frustration box"—a box containing a hundred or so seldomly-used patterns. Early in July that year I traveled to the Loyalsock Creek in Northcentral Pennsylvania along with another avid fly fisherman, Dick Mills. We hit the "Sock" on one of those evenings when no artificial large or small seemed to work. We tried fly after fly, pattern after pattern—all with no luck.

By now evening had arrived and the stream was in complete shadow. We headed upstream towards our next objective—a long deep hole about ¼ mile long with plenty of





Two versions of "The Fly For All Summer" . . . the regular Slate Drake on the left and the fast water artificial on the right. Photo by Richard Mills

fast water. Large dark gray May flies started emerging profusely. I captured a dun emerging nearby and recognized it as a Slate Drake. Now was my chance to go to my frustration box and select a realistic pattern to "match the hatch." On the second cast a large rainbow sucked in the fly almost imperceptibly in the fastest water in the pool. When I landed the fourteen inch rainbow I was happy with the initial feeling of success a new pattern always gives me. Meanwhile, Dick Mills had a large rainbow rise for the same artificial two feet from him when he was raising his rod to cast again and lost the large fish.

In my position with Penn State University I travel quite a bit registering adults in Continuing Education classes. Recently, in September, I had an hour before a scheduled registration in Tunkhannock, a beautiful Northeastern Pennsylvania town. On my way I stopped off at Bowman's Creek, an excellent but heavily fished stream. I only had a short time to fish so I left my car with my rod, net, and a box of Slate Drakes. I had no time to change clothes but arrived at the stream with a bright orange shirt, tie and new shoes. As I approached the stream, I realized how I was dressed, and how I must have appeared to any passerby. On the tenth cast, I hooked a rainbow about 13", released it, and proceeded to the next hole—one with a large hole under a root. After five fruitless casts I was ready to quit; but like most fly fishermen, I had to make one more cast. The fly landed an inch from the root and immediately the fly disappeared and I heard a noise like somebody had thrown a large log in the creek. Nervously, I set the hook and played what I now realized to be a large fish. After about

fifteen minutes and two wet shoes I landed the eighteen inch brown trout which had succumbed to the Slate Drake.

Emergence of the Slate Drake May fly

Since the method of emergence for the Slate Drake is unusual a brief look at the life cycle is important. The nymph is usually found in fast water. When it's ready to emerge the nymph swims to shore and emerges. This is one distinct disadvantage to using this May fly: the emerging d is usually not readily available trout. The newly-emerged dun to a nearby tree and in a day or sheds its dull-colored skin for a brightly-colored one. The adult spinner is now called the White Gloved Howdy. The female spinner after mating, dips its abdomen in water depositing the fertilized

As suggested before, few duns normally on the water; however, on windy evenings or during unusually high water many of the nymphs parently don't swim to shore and emerge along the edges of the stream and are eagerly sought by trout. The White Gloved Howdy is also present

in good numbers and an imitation of the female spinner is productive.

I have seen large hatches of "bicolors" in June, July, August, and September with the largest hatches in June and July. Occasionally, however, fairly large hatches are evident in August and September. The usual occurrence during August and September is smaller, less frequent hatches but the Slate Drake usually works well with or without a hatch present.

Patterns

Why should you use the fly? First, the natural is very common on streams with some fast water, from Michigan to New York. Furthermore, the May fly is a large one (size 10 or 12 hook). Finally, the May fly the artificial represents is probably present more days of the trout season than any other artificial.

For
a

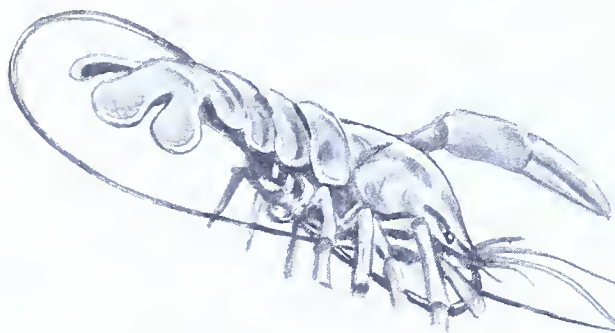
Four nice trout from Penn's Creek on the Slate Drake in late July.



using

CRAYFISH “takes know-how”

by G. E. Hohenshilt



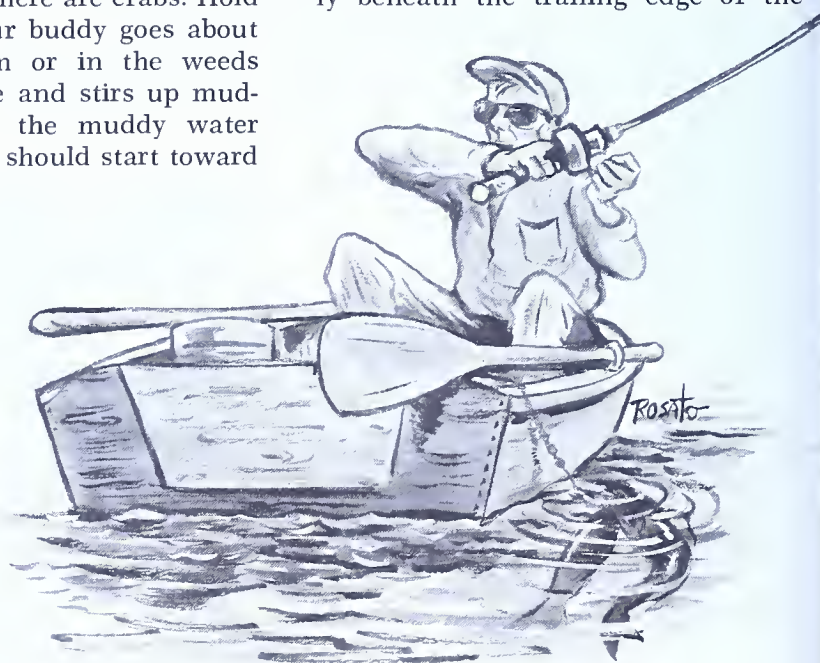
Patches of waterweed will always contain soft shells and peelers provided there are crabs in the stream where it grows. Water weed is a deep dark green and has a long stem with small leaves shooting off the stem at very close intervals. It looks similar to the old fashioned string of Christmas tree tinsel once used in trimming the tree. An excellent picture of the water weed is contained on page 18 of Special Circular 79, Aquatic Plants, Management and Control in Pennsylvania, The Pennsylvania State University/College of Agriculture/Extension Service/University Park, Pennsylvania.

Now get out your minnow seine and breather bucket and, if you can convince a buddy to go along, so much the better. Go to a stream where you know there are crabs. Hold the net while your buddy goes about six feet upstream or in the weeds close to the shore and stirs up muddy water. When the muddy water enters the net, he should start toward

it kicking stones, mud, sand, and gravel until he reaches the edge of the net. Lift the net and you will have crabs—hard, soft, peelers and dingy ones. To seine crabs by yourself, holding both net poles in one hand walk as far up stream as possible while still holding the net, and follow the same procedure. The writer gets crabs by himself in clear water by kicking a stone, then following the soft shell or peeler and picking it up. Experience will teach you to differentiate those from the hard shells. Pick each up by the back of the head BUT DO NOT SQUEEZE—YOU WILL KILL THEM. The soft ones are easily identified so these are put in your breather bucket which has been filled about one fourth full of water.

To determine the peelers from the hardshells, gently squeeze the tail in back of the head and, if the shell is pliable, you have a peeler. 99% of all peelers are darker in color than hard shells and all peelers can be distinguished, without squeezing, by the presence of red flesh immediately beneath the trailing edge of the

When you are in a stream or river you will have crabs, peelers and dingy ones. The soft shells are the best bait, peelers next, and as last resort—the dingy ones. They will always be found close to the shore line in calm water, under sticks, stones, leaves and practically any cover that affords them protection. (Years ago, the crab fisherman in the Carlisle area would place strips of tin roofing under water in sandy coves in the Conodoguinet Creek. Then at night, with the aid of a flashlight, would gently lift the strips and pick up the softshells.) A softshell is almost transparent under water at night when a light is shown on it.



carapace and the first ring of the tail shell. In addition, there will be a greater separation between the carapace and first tail ring on peelers than on hard shells. The dingy crabs are identified by their tough skin which has not yet turned into shell.

If you intend to fish with the crabs the same day as acquired, they can



"Put them in a clean jar . . . and place in the refrigerator with the jar top unscrewed."

be kept in water in the same bucket. If you intend to go fishing with them the following day(s), take them home, dump the water and crabs into the sink, and drain all the water possible from them. Put them in a clean jar with soft shells on top and place in the refrigerator with the jar top unscrewed. From this point on until all crabs are used, they must be kept refrigerated or surrounded by ice. When taken from the refrigerator, carefully pour off water that has accumulated at the bottom of jar, place in center of breather bucket and surround jar with ice cubes or large pieces of cracked ice. If you have crabs remaining after a day's fishing, which is very unlikely, return them to the refrigerator. They can not be kept alive longer than four days, even under refrigeration. No respectable smallmouth bass takes a crab which has been dead for a day but these dead crabs do make excellent bait for carp and some catfish. Channel cats will not go wild for them, but you may catch a few.

Another method of storing soft shelled crabs is to place a 1" layer of damp grass or waterweed on the bottom of an aluminum container, carefully placing a layer of crabs on top and then another layer of grass or waterweed, continuing in alternating layers with the top layer being grass or waterweed. Store in refrigerator. When removing the container, cover tightly with foil and surround with ice. This method need not be followed for peelers or dingy crabs because they are not as delicate and

will not die and deteriorate as readily as soft shells.

Next, let us consider the type of equipment needed. The type of rod you use is immaterial provided it can withstand the stress against it when you set a hook into a 3 lb. bass, 10 or 15 lb. channel cat or 15 to 20 lb. carp. The writer uses two Wright and Magill A2L 6½ ft. medium action spinning rods, equipped with Eagle Claw Model ECM reels with 15 lb. test line.

The reel used on your rod must have a good drag and an anti-reverse which, when activated, permits the line to come off the spool without the handle turning, thus permitting the drag to work.

The line used should be 10 or 15 lb. test. "This guy must be a dreamer," you say, "whoever heard of using such a heavy line?" Remember that you are going to catch fish with crabs. If you are fortunate enough to tie into a Muskie, and they do hit crabs, you will be wishing that line was 50 lb. test.

Since the crabs you will use during the spring, summer, and early fall will be in different sizes, it follows that different size hooks must be used. To be most effective, the length of the hook should be equal to the distance between the mouth and end tail segment of the crab. The best hooks found by the writer for crab fishing are Wright and Magill #181. Sizes needed will be 1/0 thru 6/0. These are single hooks packaged in boxes of 100 each. They can be purchased singularly, and sometimes during the summer you will need each size. You will find some crabs for which even the 6/0 is too small.

Sinkers—Split shot, pinched-on, rubber core of slip-sinkers may be used. The bait *must* be either resting on the bottom or within an inch or so from it.

Test the point of the hook on your finger tip and, if dull, sharpen it.

Having acquired the bait and all necessary equipment it's time to catch fish. Take your jar of crabs and carefully drain off the water that has accumulated in the bottom of the jar. Tighten the lid, place jar in the center of the breather bucket, and completely surround and cover the jar with ice. Since most batches of crabs will be about the same size, a quantity of corresponding sized hooks are now selected. This batch of crabs require 3/0's, so into an empty metal box go 3/0's and about 6 or 8 size 1/0's and put the box into a trouser

pocket. Sinkers—take a tube or box of medium sized split shot, 12 or 15 heavier type sinkers and put them in a trouser pocket. If fishing from shore, take more hooks and sinkers. A fish stringer or bag is stuffed into your hip pocket. A hook sharpener is pinned to your fishing hat or any other type sharpener is put in your pocket.

In early morning and late evening, boat fishing within 60 or 80 feet off shore is better. During the day fast running or deep water is the best spot. Now anchor the boat, assemble the rod, attach the reel, and run the line thru the guides. Thread on slip sinker (if you are using that type). Sharpen the hook and attach by using a clinch knot sometimes called a fisherman's knot. Make sure the knot is pulled tight against the eye of the hook. (The writer has lost fish by having this knot slip and, to eliminate possible slipping, tie a knot (half hitch) near the end of the line, cut off the excess line, then tie the clinch knot). Check drag. Until you get used to hooking fish with crabs as bait, the drag should be set quite heavy so that it takes quite a pull to get the line off the reel. Attach your sinker about 3-4 inches above hook, if using other than slip sinkers. Take out a crab and close the jar tightly to keep the other crabs cold. Pull off the large claw and put on top of the ice for future use.

The two best methods of impaling the crab on the hook depend on the type of crabs. These methods follow:

- Soft shelled crabs.* At about ¼ the distance from the end of the tail push hook completely thru the tail from top to bottom. The hook will now be dangling under the crab.

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"After hooking the fish, always keep the tip of your rod pointed skyward. Permit the rod and the drag . . . to tire the fish"



"After-Six"

CARP

by Tim Coleman



More plentiful than trout, less than bass, and a hundred times easier to catch than the musky—the

Sure would be nice, wouldn't it? I mean, to have some fishing you could sneak out to after work or on that day off. Someplace that wasn't that far away, or once you got there didn't require a lot of cash to catch a few fish. Believe me—it's possible. Even around heavily populated areas.

First, what's going to be on the receiving end of your favorite little bit of fiberglass? It's a four-letter word that means excitement and rod-taxing power. It's *CARP*! Don't believe me? Just go carp fishing. Once you've hooked one and he goes ploughing through the water, you'll soon be a believer! Of course, there is a possibility that you may be too busy quieting jangled nerves, or wondering if the fish is ever going to stop, to scorn what you thought to be a dull, slow-moving creature.

For tackle, try "U.L.S.T."—that's ultralight spinning tackle. A five-foot rod weighing only an ounce or two, a four-pound test line, and a reel that fits in the palm of your hand. If you think such a set-up favors the fish—you're right! Finding out just how much the odds are stacked in his favor, is the fun of carp fishing.

What else? Well, lacking a UL rig, any good spinning outfit will do. Next, add another item to the shopping list—a couple of cans of whole-kernel corn. No lures of varying sizes or colors to buy, no worms to dig, no minnows to keep alive. Best of all, there is no multi-ingredient bait recipe to prepare. The rest of the things you will need you probably have—some split shot and hooks. I've never had any trouble with a number four or six eagle claw.

Now, somewhere nearby, is a creek, pond, or lake. I won't go so far as to say, "Where there's water, there's carp", but, that's pretty close. That stream where you fish for trout (around my way, that's limited to a couple of weeks a year) might be a

(upper left) "Chumming" with a few bread scraps will often reveal the pond's residents before the fishing begins.

(left) Lightweight spinning tackle increases the odds—in favor of the fish!

*...on light tackle can provide fish-
thrills that will surpass your wild-
imagination!*

start. Find a slow-moving portion of it and you're probably in business. More than likely, carp hang their hats at that lake you thought contained only a few small sunnies. One sure way to tell is to visit the lake in the evening when the water is calm. Carp love to jump and roll on the top, and if you see some big splashes upstream or out in the middle, you've just found a fishing spot.

If you still have doubts as to where you can find carp, check with your local tackle shop. Another way, and one that brings to light those spots you never dreamed existed, is to secure a topography map of the areas around your home. Such are available at a reasonable price by writing to: Map Information Office, Geological Survey, Washington, D.C., 20242.

For the benefit of Philadelphia residents, I've caught carp on the light wand in all of the following nearby locations: the lake on the property of the Rohm and Haas chemical plant in Bristol (the intake pipe on the river side is best); on Neshaminy Creek, a couple of miles upstream from Route 263, and a mile downstream from Route 532; the Pennypack Creek above State Road, and Churchville Reservoir in Bucks County have both yielded carp; and, last, for those who don't mind a little extra traveling, the carp population is alive and well at Springton Reservoir in Chester County.

Let's assume you've got a spot all staked out. You don't have to get up at some unearthly hour. Sure, carp bite at daybreak, but they can be caught all day long in the spring and fall. In the summer you can go out in the evening. It's not as hot then, and carp will cooperate.

Take a chair, a friend, and perhaps a six-pack of the cold stuff. If it's a nice day, you can sit back and soak up the sun, swap lies,—whatever! More than likely, it will be quiet. You may find yourself relaxing with all your troubles put away.

But, don't get carried away—keep one eye on that rod. It should be in a forked stick, or propped against a rock with the corn-baited hook sitting

on the bottom . . . waiting. Usually that's all that you have to do. A carp will come along—pick up and drop the bait a couple of times—then move off with it. That's when you set the hook! Sometimes a carp will forego all preliminaries and decide that yellow glob is good to eat and grab it in a rush. At times like that, if you're not alert, what started out as a pleasant fishing trip, may end up as complete frustration.

If you want to be a real sharpie, and are one of those who get fidgety waiting, you can go looking for carp. In some places, particularly on small lakes and slow-moving creeks, the fish will feed right next to the bank in very shallow water. If he's there, he'll give his presence away by a stream of bubbles or clouds of mud being stirred up. At times you will be able to see his tail fanning the water as he looks for food. With the ultralight you have enough weight with just a hook and corn to reach these fish. Cast to where you think he'll see the bait when it hits bottom. Now the element of suspense comes into it. Will he or won't he? The old heart is going a lot faster than usual when the line starts slowly moving away. Set the hook and hang on!

Which ever way you prefer, let that fish run once you've hooked him. There is no way in the world you're going to stop carp with four-pound test. Try it—I'll guarantee that you'll see how fast monofilament can be broken. Carp usually make a couple of fast dashes and after a while, (time depending on the size of the fish and the skill of the fisherman) will be swimming back and forth in front of you. Again, take it easy. You'll need time—but then, you're out for sport—not meat. He'll eventually tire, and then you've reached the crucial point. If you've brought a net, lead him into it—*head first*. Make sure the net is big enough—don't try to squeeze a ten-pound carp into a net designed for ten-inch trout! Without a net, grab him underneath the gills. Be forewarned that a ready-to-throw-in-the-towel-looking carp might come alive at the touch of your hand. On the first try, you may get a water and mud bath as the fish goes scooting away. Get him back the second time, get a good hold, and get him out of there.

If you want to pester a wife or girl friend, find one of the many recipes available and present her with both carp and recipe!

Whatever the case, don't stop there.

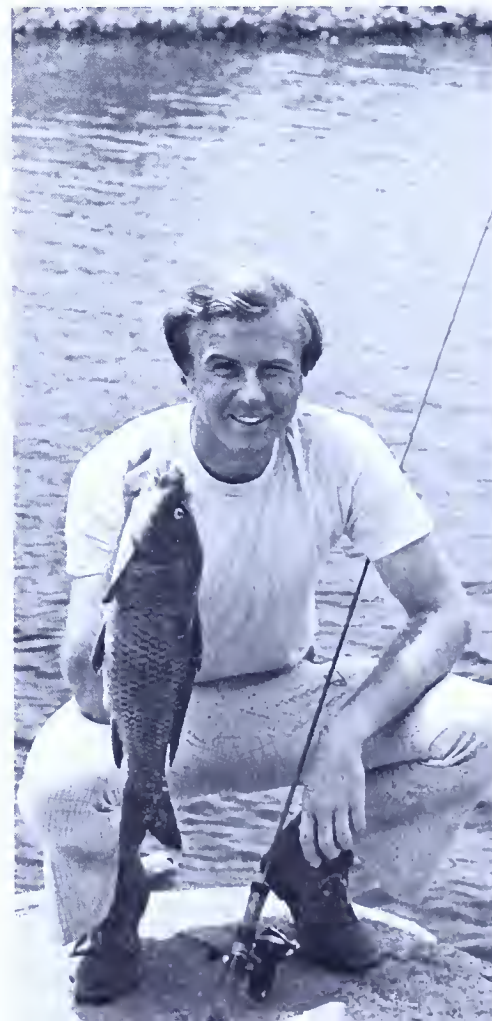


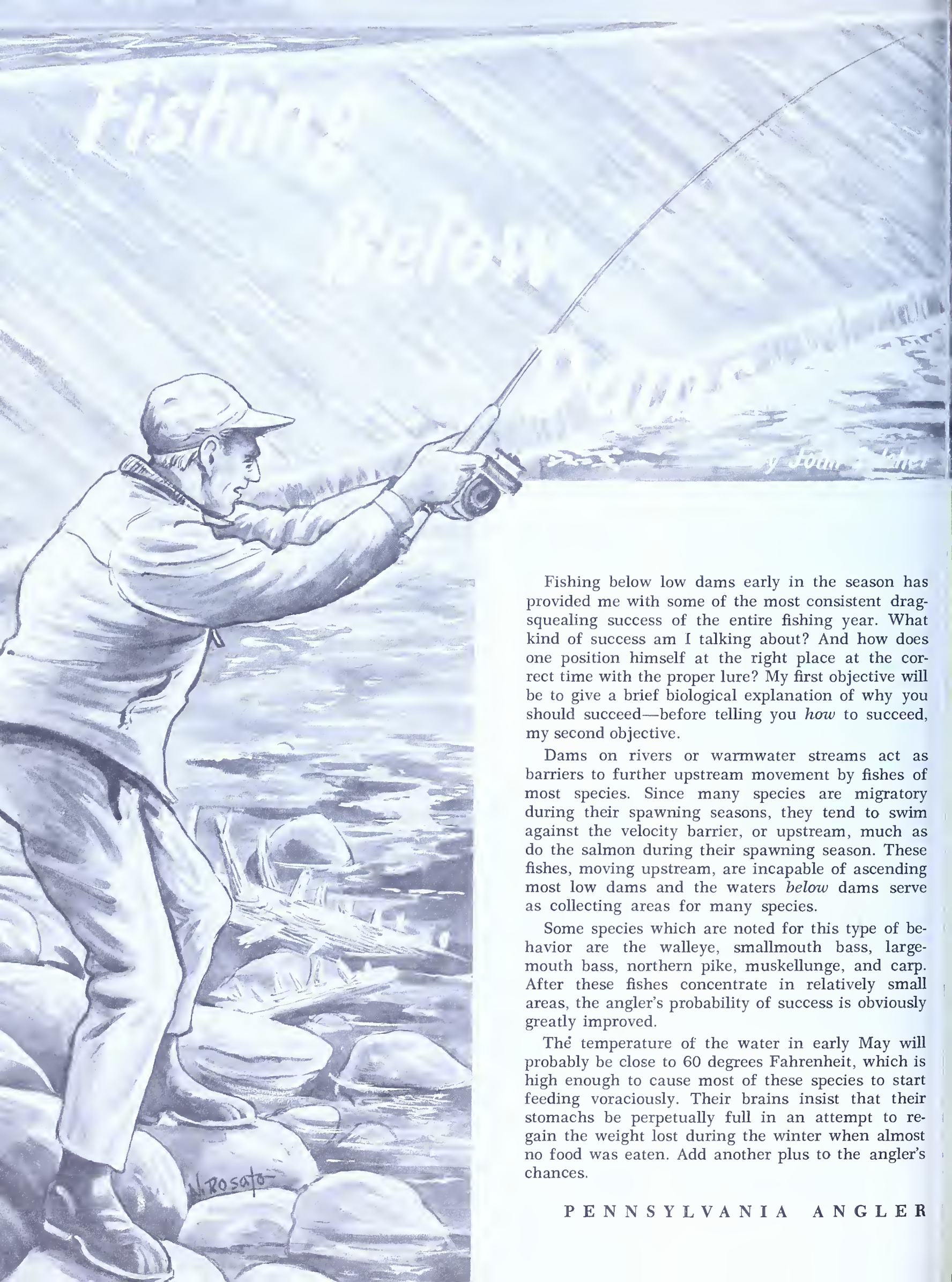
Whole kernel corn, threaded on the hook, makes excellent carp bait.

The biggest carp I ever saw in the flesh weighed a shade over twenty pounds. He wasn't taken with UL, but then it's possible. Four-pound line subduing a twenty-pound fish is certainly a challenge. You've made a start with your first fish. Now you can work your way up the poundage scale. Food for thought, isn't it?

After the first successful trip, your car trunk will probably be sporting a rod and several cans of corn. Possibly the days at the office or the plant will go faster if you've got something to look forward to after work. Now you don't have to wait until the weekend to go fishing. Instead of a ho-hum evening in front of the boob-tube, you'll be out tangling with some of those "After-Six" CARP.

The author with a carp taken in the heavily populated Bristol area.





Fishing below low dams early in the season has provided me with some of the most consistent drag-squealing success of the entire fishing year. What kind of success am I talking about? And how does one position himself at the right place at the correct time with the proper lure? My first objective will be to give a brief biological explanation of why you should succeed—before telling you *how* to succeed, my second objective.

Dams on rivers or warmwater streams act as barriers to further upstream movement by fishes of most species. Since many species are migratory during their spawning seasons, they tend to swim against the velocity barrier, or upstream, much as do the salmon during their spawning season. These fishes, moving upstream, are incapable of ascending most low dams and the waters *below* dams serve as collecting areas for many species.

Some species which are noted for this type of behavior are the walleye, smallmouth bass, largemouth bass, northern pike, muskellunge, and carp. After these fishes concentrate in relatively small areas, the angler's probability of success is obviously greatly improved.

The temperature of the water in early May will probably be close to 60 degrees Fahrenheit, which is high enough to cause most of these species to start feeding voraciously. Their brains insist that their stomachs be perpetually full in an attempt to regain the weight lost during the winter when almost no food was eaten. Add another plus to the angler's chances.

In the rapidly moving water below a dam, gamefish usually do not hesitate to take the angler's offering. If they wait too long to gobble up the morsels offered them, the current will quickly carry the food away. The unexplainable fixation which most of the previously mentioned species have on minnows makes a minnow or its imitation an ideal lure for these conditions.

Although the entire area below a dam can provide good fishing, there is a type of water which is exceptionally productive. Even though discrete rules rarely if ever are applicable in all situations, a certain tendency seems to emerge. For the species already listed as being concentrated below dams, areas of relatively quiet water adjacent to fast water will produce fish most consistently. Quiet water attracts these species because their body shapes are not ideally streamlined for life in strong currents as are trout and salmon.

Cast and retrieve your minnow imitation near the boundary between the fast and slow water. More specifically, impart action to your lure while guiding it through the fringe of the quiet water in a direction parallel to that of the nearby flowing water.

To illustrate the type of action which is typical during a fishing trip in early May below a low dam, two recent fishing experiences will be enlightening. Carmen Troil and I were fishing below Rock Hill Dam in Lancaster County using white bucktails. The carp is so extraordinarily abundant below the dam that accidental snagging is inevitable. In fact, those who fish below low dams with bucktails during early May can expect some foul-hooking of carp. A large, stubborn carp hooked in this way may make your bucktail unavailable to gamefish for fifteen minutes or more. The carp partially makes up for the fewer gamefish that can be battled in a day of fishing by offering an unspectacular but tenacious fight. Carp are known to be less wary during their spawning season. Evidently a lure passing at close quarters does not initiate the usual fright reaction, and thus the inconvenience of an unwanted carp. Anglers who may be tempted to add foul-hooked members of this species to their stringers should heed this warning—these carp *must be returned to the water*, for *foul-hooking* fishes of any species is *not a legal method of capture*.

During a particularly frenzied bit of action, I hooked a fish on four consecutive casts. The first two fish pulled loose whereas the third, a carp weighing seven pounds fought doggedly for ten minutes in the fast water before submitting to the landing net. Shortly after the fourth cast, I felt a heavy drag on the line. I was certain that another carp had been snagged by the bucktail. To my utter astonishment a largemouth bass jetted clear of the water with gills flared and body twisting furiously. Because of the slack line this angler so graciously provided, the bass found it very easy to propel that nasty "minnow" out of his life forever. The bass looked ev-

ery bit of five pounds and would have made a nice picture even though he would later have been returned to freedom until at least the middle of June. Along with the carp and the largemouth bass encountered, the bullheads and smallmouth bass proved to be very cooperative. We didn't catch a walleye, but we heard that a thirty-inch plus specimen had been caught the previous day.

A few days later I sampled the fishing below Red Hill Dam, also in Lancaster County. Because the shallow, rocky area below the dam had claimed many bucktails on previous trips, I chose a diving minnow imitation, the "rainbow runner". When retrieved very slowly and erratically the lure imitates the behavior of an injured minnow.

It has been shown that unnatural behavior of a prey organism tends to draw attention of a predator. A gamefish will swim past 100 minnows, for example, to attack one that is swimming in a manner differentiating it from the rest.

Farther north, Pennsylvania Anglers can expect some of this action to extend into late May—even early June. Take advantage of Nature's built-in corrals—try some of the excellent fishing available **BELOW DAMS.**



Using Crayfish

continued from page 13

Next, insert the point into the mouth area and press firmly inward toward tail until only the curve of the hook is visible. Pull the line tight and the hook will rest next to the body of the crab between the two rows of small claws.

b. *Peelers.* The loose shell must be removed from the tail and head. Hold the crab on both sides of the tail and with your fingernail break each segment of the top shell down the middle the entire distance of the tail. Gently remove shell, making sure you do not pull off the flipper. The top and bottom tail shell will come off in one piece. To peel the head, press your fingernail gently thru the shell at the side of the head and remove this shell. The area containing the small claws under the head will not peel. Placing the peeler on the hook is similar to placing of a worm on a hook. Insert point of hook into tail flesh on bottom of tail next to the flipper and move point forward inside the crab bringing it out under the mouth area until the hook barb is showing. The same procedure is used for "dingy" crabs. **DO NOT USE THIS METHOD FOR SOFT SHELLS.** If you do, you will lose the crab on the first cast as the hook will rip thru the soft flesh.

Cast bait down stream, engage the anti-reverse and set rod next to you in the boat. Watch that rod tip—upon seeing the slightest twitch, pick up the rod quickly with one hand and with the other hand grab the line in front of the reel. In an instant your line will take off down or across the river. Lean forward getting that rod in front of you as far as you can and when the line tightens, set the hook. *Setting the hook is your most difficult assignment.* If you are using a soft shell, you must get the point of that large hook out of the soft shell and thru some part of the mouth of the fish. If you are using a peeler or dingy crab, you must still get that large hook thru the mouth of the fish. Hold that line firmly to prohibit line from coming off the reel and strike viciously with the rod. Bringing your rod up quickly to set the hook without holding the line will just not set the hook as the line will come off your reel, although you have the drag set heavily. If you have hooked a heavy fish, let him run a few feet and then

reset the hook. After hooking the fish, always keep the tip of your rod pointed skyward. Permit the rod and the drag, which you may have to adjust, to tire the fish.

If you have a limited number of crabs and desire to extend your fishing, in addition to pulling off the large claws as aforementioned, keep all pieces that have been retrieved when you unhook the fish. Put these pieces on ice. After using all whole crabs change the 3/0 hook to a 1/0 and string on the pieces. The claws off a peeler crab will peel, so take off the shell. Trophy fish can be caught on these claws, bits, and pieces.

Using crabs for trout requires a different technique. Soft shelled crabs are deadly on old crafty native brown or rainbow trout, providing again that the stream in which they are found contains crabs. The best time to fish for these old timers is two hours before and one hour after dawn. The aforementioned equipment is in order except that slip sinkers **MUST** be used and a carbide light is needed. Bait hook on one line, pick up rod, and proceed down stream on the bank 40 to 50 yards. Drop bait into stream about 18-24" from shore line, with rod extended over stream and reel on free spool, return to light. Prop rod and take up excess slack. Bait hook on other line and cast into current a bit down stream and prop rod close to the other rod. Direct beam of light on both rod tips, sit down and watch those tips. Pick up rod when the tip shows movement. Open bail or put on free spool and hold the line in front of reel. An old native trout will not pick up the bait and take off like an express train, he will mouth the crab and slowly move out into the current. If he feels the slightest drag or weight, he will immediately spit out the crab. (This is the reason that a split shot or other type sinker is not used.) Slowly feed line as he moves out into the current and after he goes perhaps 3 or 4 feet, sink that hook into him while he is slowly swimming away.

In conclusion, I'd like to recount a fishing experience last year with Mr. Chester Deckard, Liverpool, Pa. The previous evening, Chet, told me that the bass were not cooperating. The few being caught were in the 9 to 12 inch class. Arrangements were made for a fishing expedition the following morning and we would use crabs I had acquired that day.

I arrived at 6:00 A.M., had a cup

of coffee with the host and we walked across Routes 11-15 with the gear. Noticing I did not have a tackle box, he said, "Where is your equipment?" I replied, "In my pocket." He just shook his head.

Chet cranked the airboat motor and headed up stream. I told him that it made no difference where we anchored, provided there was 9 or more inches of water. We anchored at one of his favorite spots mid-river in sight of town. He promptly put on a bobber with a hellgrammite and cast out while I sharpened a hook. After putting on adequate weight, then a crab, I cast down river and set down the rod. While sharpening the hook on the other rod, I noticed a twitch on the end of the rod. Dropping the hook, I grabbed the rod just as a fish started down stream towards Liverpool. Upon setting the hook, a 14" small mouth Bass skyward soared. He was landed and promptly released, meanwhile "Chet" had not as yet, had any action. The rebaited line was again cast in the same location, and I continued sharpening the other hook. Finished that job, put on a crab, and cast this time about 30 yards downstream. Suddenly I noticed a bite on the other line. Picked up the rod and set hook and another small mouth Bass took to the air. While playing this one, I had a bite on the other pole! Picked that one up by one hand while placing the other rod under my thigh, I set the hook into another bass! I then landed and released a 15" bass on one line and a 16" bass on the other. Chet said, "Do you know that you just caught and released three bass larger than any caught here in two weeks?" I just grinned.

Chet then decided to give crabs a try so his 6 lb. test line was rigged for crab fishing. I told him his line wasn't heavy enough to set hooks into respectable sized bass, and that it would break. After breaking it twice while setting hooks, he got the message and used one of my rods. Drifting down stream, we anchored at six different places. At each of these places we caught legal bass and channel catfish. We stopped counting after releasing 35 legal bass. That morning we killed 8 bass, all 16 and 17 inches long and weighing between 2½ and 3¾ lbs!

Everytime Chet and I meet, he says, "I still don't believe it!" You won't believe it either until you try fishing with soft shelled and peeler crayfish!

On the entertainment stage there are many actors who go on just before the star of the show. These fellows usually have just as much talent and ability as the star has, but they lack their glamorous appeal and so are relegated to a lifetime of *second billing*.

The same is true in the angling world. Reams of paper in fishing magazines deal with trout, bass, and other "glamorous" fishes. It's very enjoyable, but something is missing that will balance things.

I would like to call your attention to a member of the finny academy that has given hours of pleasure to many anglers of all ages; is found and caught everywhere; and ounce for ounce, is as spirited, versatile, and spunky as any other fish—the catfish! No, not the leviathan size *blue* or *channel* cat, but the "common" bullhead, *Ictalurus Nebulosus*.

Most of us started our fishing careers by pulling in the bullhead, mud cat, horned pout—call him what you like. He is the fish generally associated with boyhood and cool evenings down at the local pond during school vacation. I've caught quite a few types of fish and been on many a fishing excursion, but etched in my mind's eye are the peaceful outings for bullheads with hickory poles and thick black dacron line.

The kids don't have to have all the fun. When a body gets tired of looking for the hatchery truck, or that special bass river, try some good old fashioned catfishing.

Bullheads will call anything "home," from muddy creeks, silty lake bottoms, and sluggish rivers, to swift cold water brooks and rolling rivers. Many a time I have drifted a worm into a nice pool in a mountain trout lair and hooked Mr. Whiskers instead.

He is also easy to fill a stringer with because he's so numerous and his appetite welcomes just about anything. He feeds mainly by scent and feel; worms, minnows, snails, aquatic vegetation, chunks of meat, dough-balls, and hundreds of other "secret" concoctions fishermen devise will take the catty. A friend of mine uses *broiled* hot dogs diced up into three inch strips—only *broiled*, mind you, nothing else.

Water pollution, oxygen depletion, and rising water temperature have chased many gamefish from areas they once inhabited. The bullhead can

"Mr. Spunk" The CATFISH

by

Francis J. Radzievich



stomach more of that than most other fish. I have caught them from ponds filled with acid mine drainage in the Anthracite area of Pennsylvania. The other fish in those ponds were belly up and fit for the buzzards.

During a trout expedition for native brookies, a friend and I were singing the praises of that trout's coloration. "Boy, these speckled trout are a million times as beautiful as those *dull colored* bullheads you spend so much time after," my friend said. Granted he's not very beautiful, but "*dull colored?*" If you agree with my friend, you should visit your local optometrist. A bullhead's back and flanks are covered with a rich multi-color of deep browns, olives, greens, and yellows.

Eating a meal of deep fried catfish is a high pleasure. When taken from clean water, tender succulent flavor is a treat for anyone's palate. His table virtue is about the only one that is recognized world-wide.

As a fighter when hooked he is not spectacular, but does have a respectable flip flopping shake that sends him head-over-tail in an energetic splash when breaking water. The bigger ones bore powerfully into the deeper waters, and have quite a knack for putting underwater obstacles between him and the fisherman. Bullheads grow big too with the average size being between nine and twelve inches. The State record for sporting tackle is a 28½ incher that weighed in at 11½ pounds.

Last June, I was on the Susquehanna River for the opening of the bass season and a fisherman up river from me had a strike and started playing what looked like a heavy fish. He swore he had on a three pound smallmouth and judging by the way his spinning rod was bent and throbbing, it looked like he did! When the fish came into view, it turned out to be a catfish about sixteen inches long. What did this guy do? Muttered a few words about "them darned catfish" and broke the line off, hook and all. Strange, but not uncommon. Some people aren't educated to the fact that this bewhiskered fellow is worth catching just as much as a game fish. Thankfully, the ranks of catfish appreciators is swelling.

I'll tip my hat to the catfish clan anyday. He's been giving me and many others recreation and sport for many a year. His reputation deserves a little boost.



YOUR INBOARD— is it really ready?

by Don Parrish, WWP Beaver County

The 1972 boating season is just getting underway, but is your inboard really ready to pound the surf? The answer to this question should be yes if you took the time to lay up properly last Fall. Nevertheless, a thorough engine tune up is vitally important if you want to enjoy another season of trouble-free boating. With a little prudence, your boating year can be carefree of engine bog down.

The satisfactory performance of an engine depends upon two key functions if you expect it to deliver maximum horsepower for which it was designed. The mechanical and the electrical components must pull together to obtain peak efficiency and smooth operation. Of these two main functions, I'm certain the experts agree, the electrical system is the life blood of any engine. In other words, your engine can have internal wear and tear on the moving parts and still hum right along. Throw in a fouled spark plug and Brother . . . you've got headaches! Or perhaps, you may have what is known as an intermittent condition—now you have it, now you don't! Ask any TV repairman about these tough dogs sometime. There are a multitude of ignition problems which can plague any engine and, strange as it may seem, this is the area most boat owners overlook until the family cruiser lets 'em down on a Sunday afternoon in the middle of the Ohio River.

To eliminate this let down on the part of your engine this summer, let's take a step by step look at what should have been done prior to launch. I'm assuming you or a friend has some knowledge about an engine and know which end of the wrench is up. By all means, leave major difficulties to the man who wears the title "mechanic."

First we must consider the heart of your ignition system, the battery. The power pack should be *fully charged*. Unless the battery was on trickle charge all winter, pull it out for recharging. While the battery is out, clean the terminals and cable connections thoroughly. Light sandpaper will do the job effectively. Before connecting the battery cables, rub a light coat of petroleum jelly over them, fasten tightly to the terminals, and lay a coat of cup grease on for added protection against corrosion.

The next important item—the spark plugs. If the plugs don't fire, you don't go! It's just that simple. As I mentioned earlier, just one fouled plug can create problems. Your engine will start and run, but sound like a threshing machine and have about as much power as a house fly in a barrel of molasses. Sure you can save a buck by cleaning the old plugs and re-gapping, but why cut corners here? Get a new set

of factory recommended spark plugs and a feeler gauge. Set them to the proper specs and replace the old set.

After the plugs are squared away, pull the distributor cap and check the contacts inside the cap for wear and also for hairline cracks which could draw moisture and cause rough running.

Next, take a close look at the rotor cap to insure the contact is not burned badly. If either the rotor or distributor cap have seen better days, pick up a new one at your neighborhood auto parts store. You'll be glad you did!

Before replacing the distributor cap, examine the points. Many times the points will be burned enough to cause them to stick occasionally. This will be recognized by a buck and jerk effect on the engine. You have probably experienced this action in the family auto one time or another. If you decide you need new points, be sure to toss in a new capacitor (condenser) also. This little device is exposed to surges of current millions of times and may break down when you least expect it. Set the points to specs just as you did the plugs.

Since the coil provides the initial snap to "light off" the engine, it should also be in top shape. You can take it to any service station equipped for a bench test. If the coil is up to snuff, it should jump spark better than a quarter-inch.

Speaking of jumping spark, brings to mind one last problem to consider before you close the engine cover. Ironically, you will have to open the cover to detect the culprit. The problem, known as "insulation breakdown," occurs when spark plug wires develop cracks in the insulative covering causing the spark to jump to ground. This shorting of spark to ground can kill an engine immediately. Inspect each wire carefully to determine if heat and dampness have caused deterioration of the protective covering. It may be necessary to run your engine after dark to detect a breakdown under load conditions. If the problem is insulation breakdown don't be surprised if the engine lights up like a Christmas Tree, or should I say Fourth of July fireworks! At any rate, you'll get the message.

When replacing spark plug wires, remove and replace them *one at a time*. Use an "off with the old"—"on with the new" approach to avoid confusion. If you get the wires crossed, your engine will sound like the threshing machine I spoke of earlier. Provided you ever succeed in getting it started!

To complete your early-season tune up, check the
continued on next page

engine timing to insure maximum efficiency. An engine in dire need of timing will back fire through the carburetor and may be shrugged off as dirt in the fuel lines. To install new plugs, points, condenser, rotor and distributor cap, and overlook proper timing is similar to a football coach designing a touchdown play and having a player miss a key block!

Now that I think I have covered most of the important items involved in an early-season tune up of your inboard, what about those new boats with transistorized ignition systems? I'll have to refer you to one of those specialists known as an "Electronic Diagnostician." He may be too busy to make house calls—but you can always take the "set" into the office!

Let's Buy a Boat

continued from page 9

we chose a 15 ft. fiberglass with open hull. The boat had a Boating Industry Association rating of 6 passengers. This means that no more than 6 passengers or 1240 lbs. could be transported at one time. Four passengers can be seated in the main section and two in the open hull. One of the characteristics I was looking for in a family boat was *stability*, both while at rest and moving. For this reason we chose a boat with a cathedral hull. One of the advantages of this hull design is that at rest, there is hardly any up or down or tipping movement of the boat, even when people are standing up and moving around. This is particularly appreciated when rigging up for waterskiing, landing fish and when loading and unloading passengers, especially if they have to step up or down from the dock. Another advantage of this hull design is that under full throttle it corners without swaying a great distance from the horizontal.

I decided that I was going to buy the boat, motor, trailer, and all equipment for boating and waterskiing in one package. This package was also to include the trailer hitch for the car and its installation. I decided on a package deal for several reasons. One was that I wanted to know exactly what it was going to cost me to put a fully equipped rig in the water. I also felt that I could get a better deal on a package. This also meant that when the outfit was delivered, it was ready to go into the water.

Using this approach involves making a list of items to be included in the package before talking price. I feel that if I were buying a boat from scratch again, I would do the same thing.

Needless to say, I learned a great deal about boats and the purchasing process. Some things that you might want to keep in mind before purchasing your boat are the following which may be overlooked in the initial enthusiasm of buying:

1. Where are you going to dock? Is there docking space available where you will do most of your boating? What will these docking privileges cost?

2. Remember there is a registration fee for your boat and another fee for the trailer.

3. Where will you store your boat during winter? If you don't have space in your garage or on your property, it probably will cost extra to have someone store it for you.

4. Your motor especially is going to need service. Is this service readily available? This is going to add

to the cost of operation.

5. Operating a boat may cost more money than you anticipated. For example, you can never tell when your motor may need a new propeller. All that is necessary is one submerged obstacle to make a prop useless. Also our 50 horsepower engine on our boat towing waterskiers, uses at least 5 gallons of gasoline in an afternoon. Then there is the oil needed to mix with the gas.

6. At some lakes, in order to launch your boat, it is necessary to pay a launching fee.

7. Your boat will need to be cleaned from time to time during the boating season. How many times of course will depend upon how long it is kept in the water and the condition of the water where you do most of your boating. Our experience was that it is much easier to clean the boat frequently than it is to let it go for a period of time. Also, a clean hull helps assure maximum performance of the boat, for it is a known fact that the speed of a boat is reduced by a dirty hull. One of the things the boater should realize is that, "If you want to play, you have to pay" in keeping your equipment in good condition.

Although the above list is by no means complete, it should in no way deter anyone from the purchase of a boat if they have decided to buy. The pleasure which a family can have with a boat more than makes up for the costs which one may not immediately think about when purchasing. Needless to say, our family had a great deal of pleasure with our "compromise" boat. Waterskiing, pleasure cruising, sunbathing, and picnicing were all included in the summer's fun.

A great deal of time was also spent fishing. My son and I found that we could fish rather comfortably from our boat. In addition we discovered the excitement of musky fishing. Actually, our family boat made an avid musky "fisherwoman" out of our daughter, Pat. She consented to drive the boat for us several times while trolling. After the first musky, she was no longer content with just driving, but also wanted her turn at trolling!

I know there is no unanimous agreement on the part of all sportsmen about the wisdom of our decision to "compromise" and buy the kind of boat we did. Certainly, as a fishing outfit there are some disadvantages, such as not being able to use the boat on bodies of water where the horsepower is restricted. However, I'm willing to live with this, especially when there are so many things we can do with the boat as a family. Would we make the same decision again? **YOU BET WE WOULD!**

Watercraft Safety Coordinator Paul Sowers presented a conservation program to Mrs. Major's assembly of Fifth and Sixth graders at East Hanover Elementary School in Lebanon County and at the conclusion of the program asked the question—

What does Conservation mean to you?

I think conservation is very important to me. I need air to breathe and water to drink. That is why you should keep the air and the water clean. It is also important to keep the water clean to keep the fish alive and for all of the animals. It is important to keep the air clean so the birds can fly without having to fly through the air pollution.

Suzanne Hetrick



Conservation means to me that when you wake up in the morning you hear the birds chirping. It is to drink a fresh glass of water without it being polluted. Conservation means to see fish swimming in the streams, to see wildlife when you go somewhere, to have trees to prevent erosion, and to keep flowers and plants alive. To me conservation means to keep things preserved for future people to live a happy life.

Deborah Sowers



Conservation means to me that people save the wildlife and fish. It means people should clean the water and ground. People should make jack dams in the streams. They should not litter and they should put out fires after they are finished camping.

Thomas Blauch



Conservation means to me protecting things around me and using my natural resources wisely. By planting trees man is helping conservation. This prevents the soil from washing away. Again man protects one of his natural resources by building dams. There are certain sections of land set aside for animals and birds so man can't hunt.

Jill Walmer



It means saving the air, water, soil, and wildlife we have. It is having who care about our national resources and want to keep its people working together to save the land our forefathers died to give us.

Elmer Coy

The responses which follow are printed *exactly* as they were received.

Conservation means natural resources and only to kill wildlife that you need. Protect our wildlife and obey the limits and take what you need. Fish should not all be caught because then the next year there will not be any babies left to live and grow so you can catch them the next year. Animals should not be shot unless you need them for food.

Dennis Blauch



It means to see a bird play or catch a worm. It means to see fish or catch fish. It means to see animals play. It means to see beauty, and not everything dirty and suffering. That's what it means to me.

Thomas Donmoyer



Conservation means preserving fish water and soil. I think people should stop polluting water and put their waste somewhere else. They ought to pick up their litter and put it in a trash can. Also they shouldn't catch any more fish than their limit.

Deborah Eisenhauer



Conservation is not just playing around. It is real stuff. It is clean water and having animals, like when the world first started. But man did all the damage. For instance: killing for fun, polluting water and killing the fish, over killing animals when not needed. So man must clean up. Man must stop polluting air and water. Man must find different ways to use food wisely. Man must do all these things and I will help.

Karen Herr

It means having a good time fishing and hunting at certain times. It means seeing birds and trees that are pretty. It means to go out in the forest and to see animals. It also means to me having fun in the leaves

Kenneth Eisenhower



Conservation means conserving wildlife by: saving animals from being hit on the road, and by seeing that factories stop polluting streams. Some people are doing something about it. But they need more people to help.

Timothy Yorty



Conservation means clean water, healthy fish, and more streams to fish in. It means clean air for people to breathe. It means more forests for the animals to roam, and it means more trees for the birds to fly in. And it also keeps animals from becoming extinct.

Joe Haggard



To me conservation is the wise use of our resources. And the plentiful wildlife in nature. It is the new and old ways of uses for nature and the ways nature is helped and improved. Conservation to me is the things we do, to improve what we already have. It's wildlife running free and growing to reasonable amounts. It is putting back what we take. For example, when we cut trees in a forest for use, we should replace as many young trees as we cut down.

Tammy Cassel

Conservation means to me saving fish so that they live to spawn. It means that I don't kill wildlife for any reason and throw it away. It means that I don't kill wildlife for killing the fish. It means preventing forest fires. It means having clean water, clean air, and saving fish. Please, we are the *only ones* who can stop *pollution*.

Richard Lebo



Conservation means to save wildlife, and not to pollute our land. It means going fishing, taking walks in the woods and going swimming in creeks. It means riding horses on the rich soil and planting crops in the summer.

Robbie Light



Conservation means to have wildlife and not have it lost. It means having blue skies instead of gray ones. And to have clean streams instead of having them full of dirt.

Diane Walmer



Conservation means fun in the mountains, fishing in the streams, farming in the fertile soil, and hunting in fields and woods. All this is here to enjoy, not to destroy. I feel people should strive to save our land from being polluted.

Earl Wenger



I will express my feelings about conservation in the poem I have written below:

Conservation

I think conservation is a very good way of education.

The animals in the forests, the fish in the lakes, are things that only God makes.

All citizens of America should keep this colorful beauty;

For that is our most important duty.

That's what makes conservation!

Debbie Smith



It means painting and different art materials. It is eating sandwiches and walking through the woods and having a picnic. It means fishing in creeks and rivers, swimming and boating, different recreations and play. And most of all, the air we breathe and the water we drink that's what conservation means to me.

Ted Huffman

Conservation to me means keeping the water clean to drink, and so fish can live in the rivers, lakes, brooks, and streams. Also air should be clean to breathe. If the water is clean, then the fish have clean oxygen to breathe. If factories wouldn't put smoke in air we would have clean air and water. Pollution is very harmful to human beings and to animals.

Jack Gilbert



To me conservation means preservation of wildlife and natural resources. I think that people could help preserve some of these things by not littering the land and rivers. Hunting to me means killing animals for food, and not for fun, just to see them lie there. I am glad for conservation because I like to go outdoors and hike in the mountains. Also I pity some of these animals that suffer from carelessness by people

Brenda Miller



Conservation means to me that we should not ruin our state. We should keep our waters clean and not pollute them. We should not kill animals just for fun. We should keep our trees and forests beautiful. And we should not put excess chemicals and acids in the air.

Steven Espenshade



Conservation is protecting things like trees, air, and water. Everyone should help in protecting birds and other animals. Men shouldn't cut down trees and waste them if they are not going to use them. Water is another resource that we should not waste. You should be careful with what you do with wildlife. You can protect birds and animals if you help your forest commissioner.

Karen Tyson



Conservation is something I think is important. The trees all around us are so beautiful all year round. The earth so rich and the grass so green. The water so clear and the wildlife and fish so interesting. This is what I think makes the world worth living in.

Kory Sager



Conservation is the saving of wildlife, and plant life, and not polluting. We all should try to save our wildlife.

Michael Birmingham

I think conservation is birds, animals, the forest and the fish. If we did not have conservation the birds could not sing, the forest would be bare and we could not go fishing. See how dull the world would be! There are some people who don't think and they are the ones who make the world dull. They start forest fires. They also kill a lot of wildlife. Every minute a forest fire starts and a hundred and more birds and animals die just because of our carelessness.

Dana Holst



Conservation means to care for wildlife and to keep the beauty of the forest. Fish where it is posted that you can fish and just catch the limit. Do not litter because you kill the wildlife. Hunt in areas where you are allowed to hunt and just hunt the limit.

Todd Diamond



Conservation to me is a carpenter sawing wood, a fisherman fishing, a steel worker making steel. It is a forest, a pure creek, even a bird sailing in the air.

Nora Martin



A clear blue sky and a windless day. To go walking or riding in the wood. A clear blue stream to catch fish. The air clean and clear. The deer, squirrels and birds, butterflies, and rabbits living in a world without pollution. When I look out my school room window I see Blue Mountain, the trees, and the land. I not only see nature but beauty. That is what conservation is to me.

Beth Rohrer



Conservation means a lot to me. It means keeping the water clean and fresh so that fish can continue their life cycle, and also because we need water to drink, and for other needs. It also means protecting our natural resources, and protecting animals, birds, and fish, from becoming extinct. Another way of conservation is to plant new trees to take the place of those that were cut down. And that's how conservation helps to keep plants from dying out. I think that if everyone takes part in conservation we can keep our natural resources so that the generations to follow can share the beauty that we have because of conservation.

Barbara Boyanowski



GRAB BAG!

While working the Display Booth at the Western Pa. Sports Show, a man came up to WWP Valentine and asked him for a litter bag. Officer Valentine told the man that we were giving them out with a subscription to the ANGLER, as we didn't have enough to pass out to everyone. He then asked, "How much?" \$2.00? Sign me up! I need something to carry all this literature I picked up at the show! Needless to say, I think the gentleman is in for a surprise when he reads about the incident.

The Officers and Deputies in Region II sold 414 one year ANGLER subscriptions, and 79 three year subscriptions, and 517 resident, 22 senior, and 4 non-resident fishing licenses, and 95 Fishes books at the recent show held in the Civic Arena in Pittsburgh. Thanks fellows!

Gerald T. Crayton
WWP (N. Allegheny Co.)

LIVE AND LEARN?

While working at a sportsmen's show recently I had the detail of selling fishing licenses. We were doing a brisk business and a lady handed me an application she had completed. As I began to fill out the license I noticed on the line asking for color of hair she had written "S and P." I smiled, with a dumb look on my face, and asked what color "S and P" was. She politely informed me that ladies no longer had *gray* hair, it was now called SALT and PEPPER. Am I ever behind times!

James T. Valentine
WWP (Huntingdon Co.)

GUNG HO CO-OP!

In 1970, two local sportsmen obtained some fingerling trout and placed them in a large spring and fed them for the remainder of the year and the following May released them in Lake Wallenpaupack. This was the start of the Wallenpaupack Trout Clubs Coop. Nursery. 3000 trout were released the first year. With the forming of this club the co-op is in better financial condition and

has more help with the fish and the construction of more rearing tanks. Even with their limited area, they have 12,000 trout to be released this year! It takes a lot of work and time to raise these fish but anyone that is interested in fishing can enjoy himself just watching the progress of the fish and can pound his own chest when these fish are released and say he had a lot to do with such a worthwhile project. It is a shame that more of the Sportsmen's Clubs in Pennsylvania do not try to form a Coop. Nursery within their areas. I think they would enjoy it and find that there is more interest shown in their clubs with such a project.

Joseph E. Bartley
WWP (Pike/Wayne Counties)

SOME TROUT!

During a recent conversation at a local issuing agent's place of business we got into a discussion on fish identification. A local fisherman told this little story which I felt was amusing. "Some years ago we were up at our camp during the first weekend of Trout Season and had taken a couple novice fishermen along on the trip. As one of the inexperienced trout fishermen was returning to the car, the 'Fish Warden' stopped him and checked his license and asked him if he had any luck." He said "Oh, yes, I got my limit for the day." "Much to the 'Warden's' surprise when he checked the creel, the man had the exact number of the legal limit of trout but the species were the common *sucker*. The group had quite a chuckle when the 'Fish Warden' identified the fish as suckers instead of trout."

Warren L. Beaver
WWP (W. Crawford Co.)

WELL DONE!

While working the Commission's display at the Eastern Sports Show in Harrisburg we received a number of excellent comments from fishing license issuing agents for a job well done by our fishing license division.

Bryce Carnell
WWP (Franklin/Adams Co.)

IT'S A SHAME

On several occasions large fish have been found dead at the Koon and Gordon Lakes. On February 7, 1953 a largemouth bass was found at the Koon Lake which was 20½ inches long, weighed 8½ lbs. and the same February a large musky was found at the Gordon Lake that was 56 inches long. It had a plug in its throat—why at this time of the year, I am unable to answer, although it did not look like a plug that was in the fish any length of time. Perhaps the fish just picked it up—we just don't know. February of 1969 a rainbow trout was found at the Koon Lake that was a fraction over 34 inches long! Last year several muskies were found at the Gordon Lake and this year, one very large musky was found that was a little over 58½ inches long. Come on fishermen! You're letting these fish die from old age! In fishing Gordon Lake for muskies, the best places *are not fished*. I feel some study of this lake by a musky fisherman will pay off. Mr. Charles DeMoss of Bedford Valley lost one of the largest fish I feel was ever hooked in the Cumberland Dam, known as Gordon Lake. By the looks of his tackle, the next one won't break his line! Good luck Charles!

William E. McInay
WWP (Bedford Co.)

NO ESCAPE!

Recently on a sunny afternoon in FEBRUARY, SWP Greiner of Westmoreland Co., who is assisting with the operation of the Pennsylvania Fish Commission vessel that is patrolling the Monongahela River with DER Water pollution specialist Walt Sarsifield, came upon several fishermen, who with astonishment stated: "I told you those S.O.Bs would be out on a nice day like this, but I never expected them to be coming by boat."

James Smith
WWP (S/Allegheny Co.)

ALL IN A DAY'S WORK

While on duty at the Cleveland Sports Show in Cleveland, Ohio, Officer Kopena and myself were very much surprised at the number of family groups who purchased fishing licenses. A typical comment went like this. "We want to get fishing licenses to fish over in Pennsylvania." We would ask, "Where are you planning your fishing trip to?" They would reply that they didn't know, "We are

just going fishing." We then got out our maps of Forest and Elk Counties and gave them up-to-date stocking information and told them just where they could go to catch fish. They were most appreciative of our service and complimented us on all they had heard about the Keystone State's fishing potential.

Bernard D. Ambrose
WWP (Elk County)

LIKE AIR-DROP

Many anglers expressed their satisfaction of the high pressure stocking of Stevenson Dam. The use of a helicopter was accepted and many camera bugs got some nice pictures of this unusual method of fish distribution.

Stanley G. Hastings
WWP (Cameron County)

TOUGH CUSTOMER

Mr. J. J. Johnen, of McDonald, handed me a turtle hook one afternoon which was 3½ inches long with 1¼ inches between shank and point. The size of the hook is not unusual, but the distance it traveled through a snapper escapes the imagination. The turtle had broken away with the large hook and seven inches of double wire leader from lines set by the McDonald Volunteer Fire Department. Edward Hospadar, age 12, captured the snapper on land by trapping it in his sweatshirt. The hook and line had passed through the stomach and worked out by the front leg. The wound was completely healed and turtle seemed to be in good shape. The lad gave the turtle to Mr. Robert Darras for the annual snapper soup day held by the fire department.

District Warden Donald Parrish
(Beaver County)

"BFT" OR "MFT"?

Ever thought about going to college to learn more about fishing? For the third consecutive year, a ten week course in fly tying, will be held at the Wilkes Barre Campus, Lehman, Penn State University. This course is designed to acquaint the fisherman with the life cycle and habitat of common aquatic insects, and basic techniques of fly tying. Most of the time is spent actually tying flies, and learning the basics of fly fishing. Mr. Charles Meck, Assistant Director at the Campus, is in charge of the course, and one of the instructors. He is an avid fly fisherman, and spends many hours tying flies. His interest in these sports

initiated the idea of teaching these subjects at the Lehman Campus. This course has been well received with many students coming back the second year for advanced courses in these subjects. I have a suspicion that some of these students are pursuing a *masters* degree in the art of fly tying and fly fishing.

Edward W. Manhart
WWP (Luzerne Co.)

(ED. NOTE: See Mr. Meck's "Fly For All Summer" on page 10.)

"SHOCKING" NEWS!

This story was related to me by Mr. Harold Banzoff, who I met at the Harrisburg Farm Show. Mr. Banzoff raises trout in a raceway constructed on his property near a creek. To supplement the trout's diet, someone suggested that Harry string electric lights a couple of feet above his raceway to attract insects for the trout to dine on. He put the lights up and they worked well, for a while. One night soon after they were installed, a flooding problem occurred which caused the water to rise above the lights. Needless to say, the next morning Harry found a few hundred dead trout in the raceway. It was quite a shock for Harry and more so for the fish.

Frederick Mussel
WWP (Lehigh Co.)

PATIENCE TRIUMPHS!

Mr. Ray Stydinger of Thompsonstown assisted me in the original plant of muskies in the Juniata River, in 1965, and has helped in almost every plant since. He became a dedicated muskie fisherman and on a recent trip to Thompsonstown, I learned that he had just completed 100 hours and 47 minutes of muskie fishing and had not landed a legal fish. Two days later, during his lunch break, he went over to the Juniata River at Thompsonstown and landed his first legal muskie—a fine 36 inch, 12 pound specimen!

Total time required to land a legal muskie by this angler—100 hours and 58 minutes.

Congratulations and a tip of the Fish Commission hat to Ray!

Richard Owens
WWP (Mifflin-Juniata Co.)

STRANGE NYMPH!

While on patrol on Chapman Lake, SWP Rebar checked a fisherman named John Naniewicz. Officer Rebar was chatting with the angler, and

commenting about how well he could handle a fly rod. Asking what fly the angler was using, Officer Rebar was shown a nymph, which the fisherman claimed to be the best *trout* nymph on the earth. On the next cast, the angler caught into a real fighting fish and started to rib the Officer, again stating the nymph was the best *trout* nymph in the world. To the angler's surprise he landed a bullhead about 13 inches. Officer Rebar told the angler it was the first time he had seen a trout with *chin barbels*!

Robert E. Fasching
WWP (Lackawanna County)

SECRET'S OUT!

Special Waterways Patrolman, Jack D. Moore, and I were checking fishermen along Pine Creek. Not even the more experienced fly fishermen were having success. The stream was low, the water clear and the trout extremely wary. We came upon three young boys who were sitting on a large *brush pile* in the stream. As we approached, one of the youngsters was struggling to lift a hand line through the brush pile. There was considerable commotion with water flying and boys yelling, and out of the debris came a large brown trout. The boys had a total of five dandy trout, all caught on the hand line from the same brush pile, using bread for bait! The boys, having a great time, are Jeff, (15) Mark, (14) and Rod (12) Anderson, the sons of Dr. and Mrs. William Anderson of North Warren, Pa.

George R. Jones
WWP (Warren County)

ONE TOO MANY?

One particular day I had a gentleman helping to carry fish and he appeared to have taken just a little too much "snake bite medicine." He took a bucket of fish and went merrily away to the stream. As he leaned over to dump the fish, he became unsteady and dropped the bucket into the swollen stream. In trying to grab for the bucket, he almost fell in himself!

R. A. Bednarchik
WWP (Chester County)

CANOES FOR RENT

Between Milford, Pennsylvania and Equinunk Pennsylvania there are over 400 canoes for rent on the Delaware River. Float trips with boats are also services that are available.

H. F. Reynolds
WWP (Wayne County)



Jay McGlaughlin, Knouse executive and past president of the Adams County Fish & Game Association, feeds trout at new cooperative nursery.

From pollution to solution might be the way to describe a first and unique cooperative effort of the Knouse Foods Cooperative, Inc. with the Adams County Fish and Game Club. In short, industry stepped into the breach and provided the sportsmen with a fine nursery unit, complete with storage facilities, as a gesture of good will and an earnest concern for conservation and multiple water use.

The sportsmen, in turn, were able to increase their output of trout released into public waters in the Adams County area. The total result was a mutual sharing and resolution of basic water problems and, undoubtedly, an understanding of each others concerns and needs for quality water.

A brief history of the project that led eventually to the dedicatory ceremony in October of 1971 seems in order. Starting with the Adams County Fish and Game Club, the organization entered the cooperative nursery program in 1962 with the establishment of their Jack Road Nursery. Things went well for a year or so until low water and high temperatures caused heavy fish losses and nearly put the nursery out of bus-

iness. Farm ponds were employed to transfer a number of the fish and some of the survivors were placed in an attractive impoundment on the Ken Mickley property. Thus in 1965, the Mickley Pond Nursery became an official part of the Adams County Club's nursery complex. Ken, a dedicated member of the fish committee, watched over the growing trout.

Water problems continued to plague the club's Jack Road Nursery. And added to the miseries were a variety of predator troubles, both human and otherwise, related to the remote location of the rearing site. The issues were not all negative; however, the club had an honest desire to expand its facilities and services to area sportsmen. New and better sites were needed and the search began.

And now a transition should be made to the Knouse Cooperative. As the Adams County sportsmen needed more and better water, so did the food processing industry. In spite of extreme care, there were occasional pollution problems. In addition the plant complex needed more water plus water reserves that could be called upon as needed or relied upon in case of periods of draught or other

A CO-C

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Gets Ne

emergencies. Water control was another issue with a major flash flood causing terrific damage to the Orrtanna plant within the recent history of the organization. The culmination of the two sides of the water coin led to a natural liaison of the sportsmen and the industrialists.

This association was helped through the avid interest of Jay McGlaughlin, for the plant administration and an active member of the Adams County club. In fact, Jay is a past president of that sportsmen's group. Other Knouse officials became actively involved with leadership coming from the company president, Dean L. Carey; Dr. James R. Oyler, director of operations; John Peters, vice president; Clark Jacobs, plant superintendent; Ken Sanders and James Orndorff, plant engineers; and others. Equal interest was shown from the sportsmen with Pete Swartz, club president in 1969, Ken Mickley, Ken Biesecker, Floyd King, Clark Rebert, and other club members leading the way. Bryce Carnell, waterways patrolman for Adams County at the time, served as a liaison man with the Fish Commission and helped stimulate interest in the project.

A series of letters dating back to 1967 with Bob Brown, Cooperative Nursery Coordinator, from Jay

Ken Sanders (in foreground with white cap), plant engineer for Knouse Foods, checks proposed site with club members and Fish Commission personnel back in 1969.



Workmen prepare sides of raceway for amesite covering. Photo shows early stages of construction in 1969.



SPECIAL

County

Nursery

by Bill Porter

McGlaughlin, representing the Knouse interests, got the ball rolling. Conferences developed, on the site observations followed, plans were finalized, and eventually construction began. The site selected was on Knouse property at Orrtanna below a recently installed fresh water holding pond.

Construction began in 1969 with the C. E. Williams Company from Gettysburg in charge of the operation. Work continued into 1970 with severe winter conditions delaying the completion of the improved intake system and permanent cement dam. Specifics of the new raceway included the installation of cement bulkheads with two parallel 150' amesite raceways, divided into three sections each. 350' of 18" concrete tiles were involved in the intake and dispersal systems. A metal storage building for food and equipment was added and continuing plans for landscaping and maintenance set up. By February 1971, trout had been transferred from the Jack Road Nursery to their new home in the Orrtanna Fish Nursery. Since then, additional fingerling fish, supplied by the Fish Commission, have been added to the nursery's total population and are on their way to good growth and eventual distribution into area waters.

What could have been an extreme financial burden to the club was absorbed by the Knouse corporation through the interest of its executives and the courtesy of its board of directors. In the meantime, the Adams County club has released over 80,000 legal trout into Adams County waters for public fishing in its years of operation and will be able to increase its yearly output considerably as a result of the new facility. The club has also cooperated with a fish movement study developed by the Gettysburg

Area High School biology classes, under the direction of Mrs. Vickie Wietzel. By supplying fish for the study for two years along with club members and equipment to assist the students in their research project, the Adams County organization added another dimension to the area of cooperation with industry, sportsmen, and education.

But to continue the chronological development of the project, following a break in the weather, a revised and improved intake system was completed; the nursery was placed in full operation, and there seemed little yet to do to complete the project other than one important item—the dedication of the nursery with proper recognition to the contributors and participants. This activity, planned by the Adams County Fish and Game Club under the leadership of Ken Biesecker, president, Pete Swartz, and others was set for Sunday, October 24, 1971.

The invitation stated that in case of inclement weather the ceremony would be held at the association's club house on Jack Road. This was a rather prophetic statement, for perhaps the first time in the couple years history of the project from its inception to completion something failed to cooperate—Mother Nature. The rain came and continued to fall, but it failed to dampen the spirits of those assembled in the club house.

The history of the project was given and a plaque, acknowledging the Knouse contributions was presented to Dean L. Carey, president of Knouse Foods, from Ken Biesecker, on behalf of the Adams County sportsmen. A bronze plate, mounted on stone and placed at the head of the new nursery, further marked the occasion and appreciation of the sportsmen for the generosity of the Knouse industry.

In addition to the presentation of the plaque, Clark Spence, club member and master of ceremonies, introduced Bob Brown, who gave a history of the cooperative nursery program as it particularly applied to the Adams-Knouse project. Congressman George Goodling spoke of broad needs for conservation cooperation between industry, sportsmen and the general public that must rely on a quality environment for their very existence. Ken Corl, chief of trout production for the Fish Commission, spoke briefly on the problems of raising quality trout and applauded the efforts of the cooperative nurseries with particular emphasis on the fine fish raised by the Adams County sportsmen. And, in essence, the dedication was over and the project was completed—but not really.

Dean L. Carey, president of Knouse, added the continuation in his remarks, indicating that Knouse Foods were quite community oriented and that continuing services could be expected. Additional water sites had been investigated by the company on their holdings to add to the cooperative nursery program for various area clubs so inclined to take advantage of the availability of funds and facilities. It was pointed out that a project was on the boards for the Chambersburg Rod and Gun Club in Franklin County, Knouse having a plant in that area, and that additional related activities would be available from time to time from the Knouse Cooperative.

And this, to a degree, brings us to the end of the story of an important first in industrial cooperation with the sportsmen and the Pennsylvania Fish Commission in the area of mutual benefit for all concerned with multiple uses of our natural inheritance, good water.

At dedication ceremonies held in Adams County F & G clubhouse, a plaque acknowledging the Knouse contribution was presented to Dean L. Carey, president. In photo, left to right: Congressman George Goodling; Kenneth Biesecker, club president; Dean L. Carey, president Knouse Foods, John Peters, vice president (Knouse); Ken Corl, Chief of Trout Production, PFC; and Bob Brown, Chief of the Cooperative Nursery Branch, PFC.



BOATING

Questions & Answers

by Capt. Jack Ross

From J. K., New Kensington:

"My boat was almost capsized by the wake of a big cruiser that passed me too closely. Isn't there some rule that an overtaking boat has to keep clear?"

—There is, of course, but keeping clear refers to the overtaking boat's duty not to crowd your course, and this has nothing to do with the wake problem. A boat is generally responsible for any damage caused by its wake, if the wake is unreasonable under the circumstances, but this again is a hard thing to define.

Your experience is a common one, and this problem has been much discussed recently in some of the national boating magazines. Those being passed resent being tossed by the wake, but those doing the passing often have little choice in the matter, since any speed that will get them past will produce a large wake.

One possible solution, or at least some help, is a little trick that a few smart skippers know. According to all the books, you should turn into a wake or wave and take it broad on the bow. In the case of the wake from an overtaking boat, however, this will often put you beam-on to the wake, and roll you unmercifully.

When you see a large wake overtaking your boat, try throttling down for a moment and turning away from it. If this is timed right, you'll take the wake broad on your quarter, with very little effect. The wake will pass under you in the time it takes to swing the wheel back and advance the throttle, and you're on your way again without any difficulty.

From G. A., Pittsburgh:

"What is the correct propeller size for a Wizard 10-hp outboard motor, Model No. MLM 6910 A, and about how old is this unit?"

—Your engine was built in 1959, and prop should be 7 $\frac{7}{8}$ inch diameter by 9 $\frac{1}{2}$ -inch pitch.

From F. R. S., Renovo:

"Shear pins for my old Elgin fishing motor are getting hard to find, and I use up a lot of them in the shallow water up here. Is it possible to make your own?"

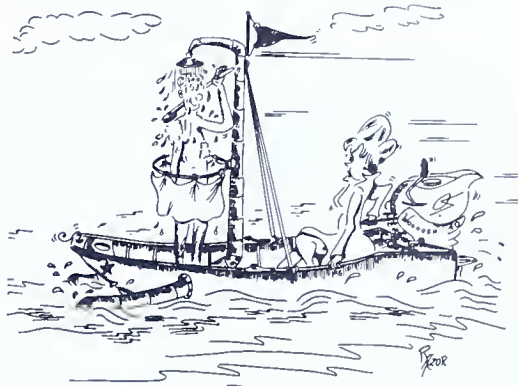
—Certainly. Get a supply of brass rod of the proper diameter from a metals warehouse, and saw up as many as you need.

From W. B., Butler:

"I am considering opening a boat livery on the Allegheny River in the East Brady area. What type of boat would you recommend?"

—Boat rental service is very rugged, and the boats should be the toughest you can find. Duracraft makes several aluminum outboards that have been successful in this type of operation. Motors should be no more than 5 hp., and be sure to include a paddle and a heavy anchor with the line made fast to the boat. Keep all your equipment in good shape, and use nothing that isn't at least twice as strong as it needs to be.

Ed. Note: Our Bureau of Waterways suggests that "W.B." familiarize himself with the Boat Livery Operator's obligations under Section 10.1 of the motorboat regulations. He is required to keep a legible record of all motorboats rented, logging the time out, estimated time of return,



"FASTER LOVE, WE'RE LOSING PRESSURE!"

and name and address of operator. He is also responsible, by law, to see that no motorboat leaves his livery without being equipped in full compliance with the regulations.

An amendment pending in the legislature will extend these provisions to all vessels rented at the livery.

From S. R., Chester:

"In purchasing a used cruiser, how much does a ship-to-shore radio add to the price?"

—If the radiotelephone is an AM frequency set, it is worth nothing at all, since you will not be able to get it relicensed. If it is a VHF-FM, in good operating condition, it would be valued at perhaps half to two-thirds of its original cost, and should be well worth the investment.

From L. B. D., Columbus, Ohio:

"We plan to make a trip up the Allegheny River this summer in our 18-foot outboard cruiser. Are there any places along the river where we could camp for a day or two?"

—The river has many miles of fine, sandy beaches plus a number of islands where touring boatmen camp during the season. So long as you avoid someone's front lawn, and clean up your campsite when you leave, you will be welcome anywhere. If you prefer company, many of the marinas and boat docks have space where you may pitch a tent, particularly on the upper reaches of the river.

From W. M., Pittsburgh:

"How much coal do river barges carry?"

—There are two sizes that are most common. The so-called 'standard' barge is 175 feet long by 26 feet wide, and will load about 900 tons. The 'jumbo' barge, measuring 195 by 35, can carry as much as 1500 tons. Both draw about 9 feet when loaded.

LEAKY BOOTS

continued from page 5

propagate bass in the numbers and sizes for a "put and take" fishery.

I would like to thank Mr. Wishart for his interest in Pymatuning Lake and the Pennsylvania Fish Commission.

SHYRL HOOD, Chief

Warm Water Production Section

BOATER'S VIEWPOINT

While I agree with much of Capt. Leising's article in the March issue on changing the Motorboat Laws in Pennsylvania, I feel that his insinuation that owners of large vessels who document their vessels do so to "escape (his emphasis, not mine) payment of the \$6.00 registration fee" is unwarranted.

If I could afford such a boat, I too would document her for a number of reasons—none of which has anything to do with the \$6.00 registration fee. One reason relates to Leising's discussion of reciprocity between states. As documented boats do not have bow numbers, the owner does not have to be concerned with re-registering his boat and changing these numbers if he should stay in one state beyond the reciprocity period. For those who like to cruise extensively, and who are lucky enough to be able to spend three or four months in various areas (e.g., retirees who follow the weather up and down the East Coast), changing bow numbers several times a year would be an onerous chore, to say the least. And aside from the fact that a number of people (including me) do not feel that a bow number enhances the beauty of a sleek hull, there are a number of other advantages to documentation, several of which are discussed in an article on documentation which appeared in the November 1971 issue of *Boating*.

Regarding reciprocity—it's a two-way street. What applies to New Jersey boaters in Pennsylvania will apply to Pennsylvania boaters visiting in New Jersey. If the reciprocity period is shortened to 60 days and re-registration is required, the net result will probably be that New Jersey boats will avoid operating in Pennsylvania waters for more than 60 days, and Pa. boaters will avoid operating in New Jersey waters for more than 60 days, as few boaters are enthusiastic about changing the registration numbers on the bow several times a year. Therefore, some of the money that is

now being spent in Pa. by New Jersey boaters for fuel, supplies, slip fees, etc., would remain in New Jersey, and vice versa. I have no statistics to judge which state would benefit most in this case, but it could well be New Jersey and not Pennsylvania.

Capt. Leising's concern in these areas seems to stem from concern over people contributing nothing while "continuing to enjoy Commonwealth facilities and services funded by fees collected from the owners of smaller vessels." Besides documented boats (probably less than 1,000) and visitors, however, there are tens of thousands of other boaters who enjoy these facilities and who contribute nothing—not even gasoline taxes! These are the owners of non-powered boats, including sailboats that do not have auxiliary power. For example, the owner of a small rowboat with a five horsepower motor must register his boat, but the owner of a large sailboat, if it doesn't have auxiliary power, does not have to. As Capt. Leising is not proposing changes in this area, he must consider this equitable funding—but I don't!

I could agree with proposed changes aimed at ensuring that all boaters who enjoy the use of Commonwealth facilities and services, for extended periods of time, contribute something toward them. I do not, however, support changes aimed at a small minority of boaters—even though I do not happen to be one of that minority.

ALBERT G. OPITZ

EDITOR'S NOTE: The emphasis on "ESCAPE" was the Editor's—not the author's, but if this was in any way responsible for your letter, Fine! We're always happy to hear our reader's views and we'd like to share with you some further comment on the subject by the author, Capt. C. E. Leising, Director, Bureau of Waterways. (with no emphasis by the Editor!)

I wonder what Mr. Opitz, would think about allowing premium priced automobiles to operate on our highways without automobile registration tags. The fact remains that owners of large boats are afforded an escape from State registration which many of us consider to be unjust. Although the law has always provided for the documentation of yachts, it used to be a somewhat more complicated procedure and required payment for the admeasurement of the boat. With the increase in the number of larger boats and the easing of the procedures which now permit an owner to

admeasure his own boat, this inequity has become highlighted and indicates the need for a revision to the law. It seems an obvious distortion when boats as small as 25 feet in length can be documented. There is no valid reason why the taxpayer should subsidize the owners of pleasure yachts by paying the tab for documentation of this type vessel. The issuance of these certificates at no cost to the owner (but at considerable cost to the taxpayer) seems to be discrimination in favor of those who could afford to pay the State registration fees which are the main source of revenue for most states in their effort to improve facilities and carry out a boating safety program.

Some of the "fun" of showing an exotic hailing port on the transom is soon to be taken away because the Coast Guard is considering closing a large number of their documentation offices for economic reasons. As a result of this move for economy many boats which are documented in small, out-of-the-way places will have to change their home port to places where the documentation offices remain open.

I agree that boat numbers on the bow of a sleek hull do not enhance her beauty but there is no proposal that these numbers would have to be changed several times a year—in fact it would be illegal to do so as long as the owner retained residence in the same state. Sixty days seems to be a long enough visit for any boatman to take advantage of out of state hospitality without payment of some fee to the state which he finds so attractive. Payment of such fee could be indicated by a decal.

Admittedly there are now some boat owners exempt in Pennsylvania from payment of registration fees. Equity would require something be done about this as it has been already done in some states. If Mr. Opitz can get legislation enacted which would treat this matter in a fair manner, I would certainly not object. He must realize that in the writing of rules and regulations we must stay in the realm of political possibility. The registration of an entirely new class of vessels—mostly small, unpowered craft and owned by the less affluent—certainly presents a different picture to the public and their legislators than the closing of an unintended loophole which gives only the most affluent the advantage of using public facilities without payment of fee.

FISH TALES



RICHARD KRAYESKI, age 13, of Hallstead caught his 13½ inch, 1 pound 2 ounce yellow perch from Lowe Lake last June. He was using spinning gear and a redeye spone.



The nice smallmouth bass held by GENE MROZEK of Portage was caught from Shawnee Lake last summer. It hit a white fly and weighed 4 pounds.



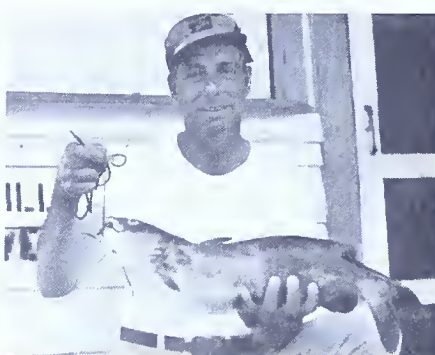
JOSEPH MOWERY II (left) of Harrisburg holds his citation winner—a 30 inch carp taken from the Susquehanna River, while ROBERT SEWELL of Erie poses on a golf course with his 30½ inch walleye taken from Lake Erie.



The attractive lady (MRS. PEGGY RHOADS of Millersburg) holds the 20¼ inch 4 pound smallmouth bass she caught from Wisconsin Creek last June while WALTER GARDNER, JR. of Hollidaysburg (right) holds his 34½ inch northern pike caught from Raystown Dam. It hit a 3 inch chub last September.



RALPH RICCIANDL of Sharon holds the 27 inch, 5½ pound, walleye he landed near Harris Island in the Pymatuning. It hit a worm.



Another large catch is held by FRED WOOD of Blythedale. It's a 24 inch catfish caught on a minnow near Clark Island in the Pymatuning.



CLARENCE and TERRY OSBORNE (left) of Sharpsville happily display the three nice northern pike they caught in a west wind from Shenango Reservoir while GEORGE E. BENSON, SR. of Nicholson holds the 28 inch channel catfish he caught from Lake Idlewild.

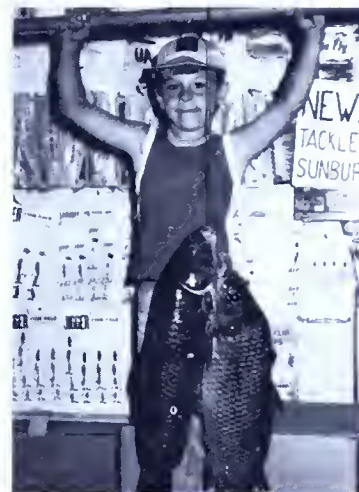


DAVID OAKES (left) of Conway had his limit by 9:00 AM opening day as shown by the stringer he holds. He was fishing the North Fork of Little Beaver River. TED GAYMAN won two citations for these beauties—each catfish measured 20 inches and weighed over three pounds.



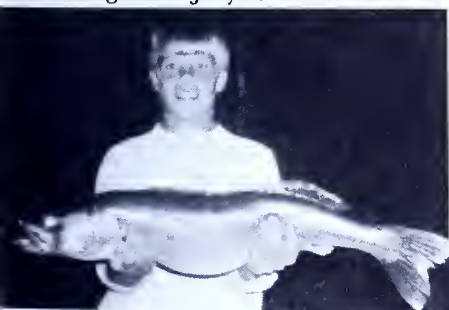


WILLIAM LABORIE of Butler holds his prize walleye taken from the Pymatuning while **LINDA** and **DEBRA HALEY** (center) happily show the largemouth bass they took from a strip pond in Washington Co. and little **MARK HULYO** of Jersey Shore holds his largemouth taken from Hills Creek Dam.



An Erie youth, **DOUG DANOWSKI**, won two of the five Junior Citations given for Eels during 1971 with these two taken from Lake Erie on minnows. **STERLING FEESER** (right) of Hanover holds the northern pike which is larger than his son. It measured 37½ inches and hailed from Lake Marburg until July 4, 1971.

STEVEN FOSTER of Franklin used crayfish and spinning gear to land his 31 inch carp from French Creek last July while **ROSS EISENHART** (right) of Trevorton, who is a bit smaller, landed two somewhat smaller carp (26 and 26½ inches) from the Susquehanna River last July using spinning gear and corn.



This large walleye, a 27½ inch-6¾ lb. beauty, was landed by **MIKE EVANOFF** (11) of Erie from Lake Erie last June using a #2 Mepps Spinner with a nightcrawler.

TIMMY REICHERT, age 10, is following in his older brother's footsteps and catching some nice Carp from the Susquehanna River. This is a 28½ incher caught on a doughball. He and Karl live in Hanover, Pa.

Still another youth, this one from Millersburg, **CURTIS HOY** holds the nice walleye he took from the Susquehanna River near his home last June.



These two young anglers, **DWIGHT LOHR, JR.** of Mt. Pleasant, and **GARY DEIMLER** of Palmyra (right), proudly display the largemouth bass they caught on spinning tackle and nightcrawlers from farm ponds near their homes.

KIRK SCHWAB, 12, of Tidioute caught his nice brown trout from Tidioute Creek using a fly rod and salmon eggs, while **RONALD COME** (right) of Harborcreek caught his 24½ inch catfish on shrimp from Lake Erie. Both catches were citation size.



ALBERT E. BESECKER RETIRES

The Bellefonte hatchery complex just doesn't seem the same anymore since Albert E. Besecker's retirement after 40 years of service! Al began his service in 1932 at the Pleasant Mount hatchery and a year later was transferred to Bellefonte where he served as a Clerk Stenographer until his retirement last December.

His wife, the former Viola Mae

Shenb, was also an employee at the Pleasant Mount hatchery—they were married August 18, 1932. Al saw service with the US Marine Corps in the Pacific theatre during WW II. His friends claim he's better than average in bowling, likes to hunt but plans to spend considerable time spoiling the grandchildren. We wish him well!

F. H. STARLING, III HONORED

In the photo below, Ralph S. Olsen (left), president of the Pennsylvania Fish and Game Protective Association, presents the organization's Gold Medal and Commendation to Fred H. Starling, III, at the organization's 90th Anniversary dinner. Starling was honored for more than a decade of service to the organization and to outdoorsmen in general. He is the 25th man to receive the honor.



SWP BOB KOPTA TOP ANGLER SALESMAN

Special Waterways Patrolman Bob Kopta, below right, receives congratulations from Editor Jim Yoder. Bob, who serves in Allegheny County, had vowed to sell "An Angler A Day" last year—and very nearly made it! His dedicated effort put 323 "years" of good reading into the homes of Southwestern Pennsylvanians. Bob's prizes included an electric trolling motor, a Heddon Musky fishing outfit with additional lures by Arbogast, Creek Chub Baits, Daredevil and Weber.



HOLD ON—

FISH STOMACH, that is! Federal biologists (below) of the U.S. Fish and Wildlife Service are currently studying the stomachs of fish caught by anglers in the Kinzua Dam in an effort to determine the preferred forage of the many species to be found there. They are asking fishermen to cooperate by leaving the stomachs of the fish they catch from this impoundment at any one of the many

sporting goods stores displaying the "FISHERMEN — GIVE ME YOUR STOMACH" signs in the Warren—Bradford area. 4,000 fish stomachs will be needed to make the survey meaningful. If you fish Kinzua, you'll be doing a great service to the future of Kinzua's gamefish population by turning in your catch's stomach as soon after capture as possible.



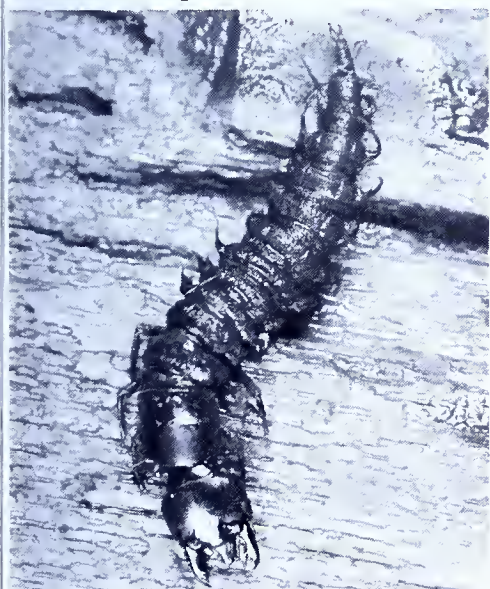
TAKING A CLOSER LOOK

by Tom Fegely

The Hardy Hellgrammite

There aren't many baits that will bite back while being impaled on a hook but the vicious hellgrammite is an exception. In spite of its tenacity, the hellgrammite is a popular smallmouth bass bait, often producing results on days when plugs just don't seem to be working.

Hellgrammites live under rocks in the riffles of swift-flowing streams. They hatch from masses of eggs laid in oval patches on overhanging trees and bushes or on stones where the hatching larvae can easily fall into the water. The chalky-white clusters contain two to three thousand eggs in each oval patch.



Hellgrammites dwell beneath rocks in swift-flowing streams and rivers.

Once in the water, the tiny larvae feed and grow for about 35 months, until they have attained a length of three or four inches. In this prolonged larval stage, they feed on other aquatic insects.

Known locally by names such as clipper, helldiver, connoption bug and water grampus, the hellgrammite has three legs and numerous leg-like appendages on each side of its body. Behind the head is a shell-like collar. When hellgrammites are handled, it is advisable to grasp them by this collar with the thumb and forefinger, thus reducing the chances of a painful nip from the sharp jaws.

The collar also provides the best spot for securing the hook while still



The most common way of hooking the hellgrammite is through the collar although it may also be hooked through one of the rear segments.

keeping the bait lively. Run the hook under the front of the collar and slide the point free. Since they are fished on the bottom, hellgrammites will crawl beneath stones or cling to underwater trash with their "tails." (A few anglers also remove the "tail".) Because of this, some smallmouth fishermen prefer to hook the hellgrammite upwards through the leathery body at the third or fourth segment from the rear.

Hellgrammites are usually available from bait shops in areas where they are used extensively as bass bait. When they're not, they can be collected from beneath rocks in swift-moving streams. By holding a minnow net below large rocks and having a partner flip them over, dislodged hellgrammites will wash into the net and cling to it until they're removed.

A minnow bucket packed with wet grass, damp leaves, moss, rotted wood

At first glance its not evident whether the rubber imitation (top) is real or not.

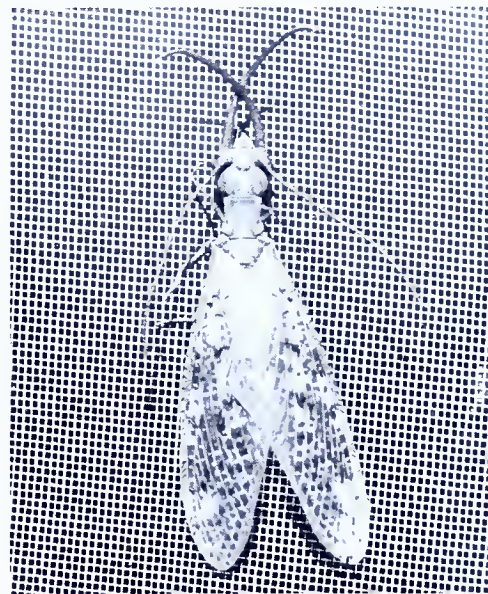


or other absorbent materials is necessary for transporting hellgrammites alive. Ice in the bottom of the bucket, plus a moist burlap or newspaper, will help keep them lively. If they're over-crowded, the hellgrammites will attack and kill one another.

The hellgrammite can be fished with a bobber adjusted so that it drags bottom as it drifts downstream. Light spinning tackle is also good. If you have difficulty casting, a split shot will usually help—as well as take the bait to the bottom where you want it.

The Adult Hellgrammite

When mature, the hellgrammite crawls from its aquatic home to pupate beneath rocks or logs on the stream's edge. After two or three weeks, a fierce-looking winged adult, known as a dobson fly, emerges.



Even when he matures, the hellgrammite is no beauty. Known as a dobson fly, the adults are often needlessly killed after being attracted by home and town lights.

This large insect has a five inch wingspread and the male possesses inch-long tusk-like jaws. The jaws are incapable of inflicting pain, their purpose being only to hold the female during mating. Since dobson flies are attracted by lights, they often show up on screen doors and light posts on midsummer evenings. Their appearance frightens people and they are unnecessarily killed.

Of the millions of eggs laid by the females, only a few reach maturity after surviving a three year ordeal beneath the surface. Those that successfully avoid fish and fishermen and develop to the dobson fly stage should be protected. It is because of these few survivors that hellgrammites continue to survive!



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JULY, 1972

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Consider Your Host— the Landowner

The Pennsylvania Fish Commission stocked trout in eleven new streams this year and an additional fourteen miles, in four streams previously approved as trout waters, were likewise stocked for the first time this year. The Department of Environmental Resources reports that over 131 miles of Pennsylvania streams improved in quality in 1971 over 1970. In every case these new stockings by the Fish Commission were made possible by improved water quality and conditions in those streams. Compared to the total of over 4,800 miles of trout streams stocked, this may not seem like much—but it is a *good* sign and the signs are *better* for the future.

However, we are quite dismayed to find that we have lost the availability of a number of our fine streams to public fishing due to the thoughtless actions of some of the beneficiaries of the cleaner water themselves.

We are referring to the posting, against fishing and/or trespassing, by private landowners due to littering and for damage caused to other properties of these landowners. Certainly we need the good will of every landowner in the Commonwealth who permits public fishing and we need to inculcate an attitude of courtesy in those sportsmen who take advantage of the generosity of landowners who open their properties to public fishing. While we recognize that a very small minority causes this damage—just as a small minority of hunters is responsible for the bad manners that cause posting, the fact remains that Pennsylvania's fishermen have lost over thirty miles of streams since they were stocked!

We have asked, through the Pennsylvania Federation of Sportsmen's Clubs, that all organized sportsmen be made aware of this ironic trend and at the same time we are asking the sportsmen, who *we* can contact, to help clean up some of the mess that has been made by that selfish minority causing the problem. While it may be distasteful to pick up rubbish after someone else—the fate of sport fishing, both for the fishermen of this day and those of future generations, may well depend on this unselfish gesture.

In the meantime, the Fish Commission is providing organized sportsmen's clubs with the designs of fence crossings, stiles, etc., hoping that these clubs will make further gestures to show landowners that the vast majority of fishermen are truly sportsmen who value the privilege extended to them by thoughtful landowners.

It is said in Jeremiah 2:7, "And I brought you into a plentiful country to eat the fruit thereof and the goodness thereof; but when ye entered ye defiled my land and made mine heritage an abomination." Let us hope that this will not be an epitaph for Pennsylvania. We are making great strides towards cleaning our streams, but this is a process that requires the cooperation and actual effort of *everyone*.

Executive Director
RALPH W. ABELE



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JAMES F. YODER, Editor

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STATEWIDE

with the EDITOR

ON THE COVER, the beautiful Allegheny River as photographed by Thad Bukowski while on a pleasure cruise last summer. Our readers can "meet" Thad again this month, in a somewhat different role. Long a photographic contributor, Thad's about the most dedicated fisherman, boater, and camper who ever came down the pike and in this issue begins a column for Keystone Campers on page 23.

Now and then we receive a letter that really touches on a sticky problem and we feel obliged to give it a bit more than casual consideration. With recreational boating on the increase, each July brings new droves of boaters to Pennsylvania waterways. Reader Richard A. Katzman, of New Cumberland, about a good stone's throw from the office, has undoubtedly encountered some of *them*—along with the regulars, and shared his concern for *safer boating* with us in a recent letter. We're going to print only part of it here . . . its purpose should be well served and Dick and I will be able to stay out of jail!

"Two articles in your February issue again point out a most serious problem which seems to be getting worse but which seems to be getting less attention and corrective action. The problem is that of careless boaters, and the two articles are, A License for Boat Operators? by Captain Leising and the paragraph by Waterways Patrolman James R. Smith in Notes From the Streams.

"Each year the antics of irresponsible boat operators grow more dangerous, while the enforcement procedures seem to grow less effective or more complacent, no doubt due to the tying of law officers' hands by politicians or other special interest groups.

"If anyone doubts my warnings, spend a hot summer afternoon where the pleasure boaters congregate. Watch the reckless water skiers pulled along by engines with too much power but piloted by vacuum-

heads with too little for brains. Watch the big power boats drag race while the fishermen and people in small boats are swamped under. Watch the water skiers caroom around the lakes and rivers without regard to human life and safety. They actually giggle as they come close to colliding with small boats.

"Unfortunately, the various authorities are more concerned with the static safety characteristics of boats. They are never concerned with the more dynamic characteristics of boats. I have often seen boats checked for lights, life preservers, etc. However, I have never seen a reckless boat operator apprehended by the law.

"Whether it requires the licensing of operators, more enforcement officers, or any other corrective actions I cannot answer. But I do know that something better be done quickly."

We certainly thank Dick Katzman for taking the effort to discuss his frustrations with us. In his original letter he mentioned specific waterways which have been omitted here for practical purposes, because Dick's letter, and the locations and situations, are typical of sentiments which have been expressed before. But we would like to take the opportunity to comment on a number of misconceptions quite common among non-boaters, non-skiers—whatever.

I could agree with our writer on many of his comments had the word "SOME" preceded boaters, operators, skiers, etc. but we simply can't buy this *blanket-indictment*. In "Boaters I've Met" (June-1971) I referred to similar operators as a "minority of problem children" and nothing has happened in the interim to change my opinion in that respect.

Unfortunately, we have this minority of problem children at every turn; yes, some are *boat* operators, but some are *car* operators, and we could go on and on until we come to the *shopping cart* operator in the nearby

supermarket. They are, very simply stated, careless *people* who could CARE LESS for the rights, privileges, or comforts of others.

The allegation that the boating problems "*seems* to be getting less attention and corrective action" and that "enforcement procedures *seem* to grow less effective or more complacent, no doubt due to the tying of law officers' hands . . ." just doesn't hold water. For examples: The number of specially trained enforcement personnel assigned to boating problem areas *increases* each year; our "fleet" of patrol vessels grows each year; the number of boaters attending boating safety courses *increases* each year; the number of boats boarded and the number of boaters apprehended and prosecuted for infractions also *increases* each year! It is conceivable that one might cruise, fish, or water ski for years and never witness another operator being cited for reckless operation—but our records will show the job is being done. It's a matter of being in the right place at the right time.

There is general agreement that education via the wallet has never been a cure-all for law breakers of any sort. We've been trying another approach for years—SAFE BOATING EDUCATION. Perhaps Captain Leising summed it up best in a letter to the Editor of Motor Boating and Sailing (a copy of which was reprinted in the ANGLER, May-1972.) Speaking of the in-depth information that can come out in class discussion, he said, "The instructor would have some chance of creating the *right attitude*—the all-important ingredient to boating safety." If we could do that I'm sure we would have fewer problems!

We have not tried to discredit Dick—unfortunately we have a number of these folks running amuck STATEWIDE—some of them join me every morning and evening in the demolition derby we calmly refer to as "Rush Hour" traffic! "Vacuum-heads" . . . I'll have to remember that.

Meanwhile, back at the marina, what can we do about those "few"? For openers, how many times have incidents such as those Mr. Katzman describes been reported to the District Waterways Patrolman? How factual are the reports? "Too close," "Too fast," "Too reckless" none of these "Too's" have ever stood up in court! Talk to your Waterways Patrolman about specific problems in your area. He's best qualified to discuss them.

The White Bass is relatively unknown to most Pennsylvania anglers but each year 'round about this time this inland relative of the Striper draws thousands of hopefuls to Pymatuning Lake.



FISHING OUTLOOK

By-- Stan Paulakovich

Surf fishermen along the Atlantic coastline and Chesapeake Bay anglers are familiar with *Roccus Lin-eatus*—the Striped Bass or Rockfish but not too many Pennsylvania anglers are familiar with its fresh water cousin *Roccus Chrysops*, the White or Silver Bass. The Striper or Rock get up in the real heavyweight class, 60 to 70 pounds. The fresh water White Bass rarely exceeds 4 pounds and the world record for this fish is a 5 pound 2 ounce beauty that was taken from a lake in Mississippi back in 1960.

Here in Pennsylvania we have one lake that is outstanding for White Bass fishing, especially in July. Fishermen on Pymatuning Reservoir in Crawford County creel tons of these scrappers annually. Fishing is done primarily at night. Twelve to fourteen inches long and weighing between one and two pounds, they are a treat on the end of a fishing rod—as well as on the table. They have a sweet and delicate flavor that is similar to that of the Crappie. These fish should be cleaned, iced down and eaten soon after they are caught. Prolonged exposure to warm water on a stringer or too long in the deep freeze doesn't improve their taste by any

Pymatuning's abundant and varied panfish population adds additional incentive to the thrill of White Bass fishing.

means.

Early in July the young of this year's crop of Gizzard Shad, one to two inches long, school up in huge congregations near the surface of the water and wander all over Pymatuning's 13,920 acres and the gamefish gorge themselves on these fry. The White Bass is no exception, but it waits until after dark to tear into these schools and send the Shad fry skittering over the surface in all directions.

During the daylight hours the shy and easily spooked White Bass lie near the bottom in the deeper holes in the lake. They are in loose schools and all fish in the school run in the same size class. Fishing for them during the day is generally slow and tedious. Some fish are caught by still fishing with small minnows, at the ten to fifteen foot depth range. Bait is suspended just above the bottom. Trollers who know the lake select the deeper channels and work their lures (small flatfish, lazy ikes or rapalas) at about the same depth. Pymatuning is relatively shallow and has plenty of stumps, dead trees and limbs on the bottom so be prepared for plenty of "hang-ups" if you're trolling. Best trolling speed for White Bass is just

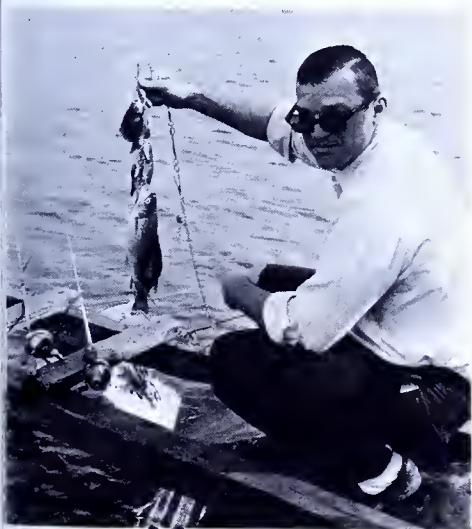
When the action begins there's always a willing helper not too far away to assist the angler in landing his catch.

as slow as you can go and still maintain good lure action. Electric motors work beautifully for this type fishing.

Early in the evening you will see the "regulars" along Pymatuning getting ready for an enjoyable session with the White Bass. A favorite spot is along the causeway between Espyville and the Ohio line. This causeway is two and a half miles long and can accommodate a lot of fishermen. Fishermen use both sides of the causeway and cast out into waters that average twelve to fourteen feet deep. Small minnows are suspended no more than two feet below the surface. Small spinners and small silvery lures are also used effectively when fished not too far below the surface. A favorite trick here is to take a regular sized black jitterbug with a twenty inch strand of leader tied to one of the treble hooks and a small streamer is then attached to the leader. Best patterns have been those that resemble the daces or gray or black ghosts. Reeled in briskly, this catches some White Bass and occasionally a largemouth will wallop the jitterbug.

Boat fishermen use the standard row boat but the dedicated White
continued on page 34

Age, sex, color, . . . there are no "gaps." All barriers are dropped when anglers share in the FUN of fishing.





TRAILER TIP—

My favorite sport is boating and fishing this is the reason I subscribed for the Pennsylvania Angler, your readers are exposed to a wealth of boating and fishing information.

Some of your readers will be buying a boat and trailer for the first time, I thought I would pass this information on to them.

When anyone launches a boat from a trailer disconnect the trailer lights, this eliminates a heated light bulb from burning out when it is exposed to cool water.

Enclosed please find money order for \$5.00 for three years of your excellent magazine. Keep up the good work.

WALTER DANISZEWSKI, Erie, Pa.

Where were you when I needed you years ago, Walt? I never got more than a few launchings out of my tail light bulbs till this dawned on me! Ed.

HAPPY READER!

I have been an Angler reader for only one year and I believe this is about the finest magazine any sportsman could want.

This magazine contains some very fine articles which are very enjoyable as well as educational. I especially liked the article in the February issue entitled "How Large is a Small Fish."

To me this article was very educational as it emphasized the importance of good water conditions and proper diets which are essential to fish growth.

I am enclosing my remittance for another renewal subscription to the Angler. My congratulations to all the staff of the Pennsylvania Angler.

THOMAS W. STAUFFER,
St. Marys, Pa.

Thanks Tom. You'll be happy to know that the ANGLER "staff" just voted you Reader Of The Month! The vote, by the way, was unanimous—4 to 0. Ed.

END OF THE TRAIL?

This could well be the last time I renew my Pennsylvania Angler subscription. Time after time my fishing pleasure has been ruined by high-powered motor boats and water skiing. Even to the point of being driven completely off of a body of water!

Now, half of your magazine is devoted to boating and water sports. Am I to be forced to stop reading the Angler too? Motor boating and serious fishing just do not mix!

HERBERT B. THOMAS, Altoona, Pa.

Come on now, Herb, it's not that bad! I'll bet you weren't catching fish at that hour of the day anyway, were you? Best time for fishing is generally early morning or late evening and I've never met too many skiers during those hours! Why not try one of our lakes where motors (other than electric, for trolling) are prohibited? Try anything, but don't stop reading the ANGLER—we'd miss you and I would hope you would miss us!

By the way, did you report any of those antics to your Waterways Patrolman? Ed.



HOW ARE WE DOING WITH THE WORMS LENA?

DUMB WOMAN? NEVER!

As a woman, housewife, mother of three girls and a "Try-Hard" fisherwoman I would like to say I think the "Pennsylvania Angler" is a very good magazine. My whole family enjoys reading it.

Also we just finished a six-hour course in the fundamentals of fishing and enjoyed it immensely. We all looked forward to Thursday night when we went to school. Jim Sherman and Allan Morris were just great teachers.

We all like to fish and "enjoy" it and camping. Thank you all and Jim Ansell for selling me the "Angler."

LENA, Mercer, Pa.

P.S. I didn't put my last name because I know some *guys* will think I'm just another dumb woman! (Maybe I am) Ha. Ha.

Lena, there is no such person as a "dumb" woman who goes fishing! In fact, we think you're rather smart! Ed.

OLD GAS

In the April issue there is an article about gasoline spill taking its toll at Benner Spring. Also an article entitled "An Early Start" by Robert G. Miller in which he recommends dumping last years gasoline. Won't this find its way into a stream eventually?

I use my last years gas from my outboard motor in my power mower.

S. A. MIHALCIK, Wilkes-Barre, Pa.

Depending upon where you "dumped" it, yes, it might. We like your suggestion better. Ed.

SPOIL SPORTS!

Your proofreader evidently is not a fisherman, he goofed on page 7 in the April 1972 issue.

I wonder how many more fishermen will notice this.

WM. LINDSEY, Conshohocken, Pa.

P.S. Angler is one of the greatest!

I believe that the picture of the rod holder, on page 7 of the April issue of the Pennsylvania Angler, is upside down!

IVA D. HAYES, Greenville, Pa.

Is the picture on page 7 of the April issue upside down? I always hang my rods with the tip up!

JOSEPH J. JOHNEN, McDonald, Pa.

ANYBODY CAN HANG THEM "TIP UP"! Ed.

QUITE A BARGAIN!

Keep up the good work in the "Angler" and in the field. I am very proud to live in a state that realizes the extreme importance of wise fish management and the development and maintenance of Fish Commission Lakes and access areas.

The \$5.00 we residents pay for a license is a cheap investment which pays indescribable dividends throughout the year. Thank you PFC.

DAVID STETTLER, Breinigsville, Pa.

Thank YOU Dave! Our boys in Engineering & Fisheries may be tempted to name a lake in your honor! Ed.

PICTURE LOVER

Thank you for the picture on the cover of the April Angler. I think this is one of the best color pictures I have seen. You're right, this is one of the best trout streams in the State!

Thanks to the Adams County Fish and Game Incorporation for stocking trout from their nursery at Orrtanna to Opossum Creek at Bendersville. With the cooperation of W. W. Singer, our Waterways Patrolman, and the Pennsylvania Fish Commission for testing and making surveys.

I am proud to say this program paid off. The Pennsylvania Fish Commission stocked fourteen hundred and thirty trout in this stream. This adds another six miles of good fishing here in the county.

The picture you had on the cover, April issue, sold twenty-five new subscriptions for the Angler in one week. Keep up the good work.

CLARENCE SWARTZ, Gettysburg

In spite of that picture on page 7? We're glad to hear your trout fishing is getting such a boost. Keep those subscriptions coming! Ed.

READS EVERYTHING

Thank you for an interesting and worthwhile book. I read it thoroughly—every edition. All the articles are interesting, even the boating ones since a lot of my fishing includes boats, both rowing and power.

Keep up the good work—I look forward to each edition.

I also collect and bind them as a years edition. They make good back references and re-reading.

RALPH CHRISTINE, Bethlehem, Pa.

Did you know that more than 60% of our registered boaters are fishermen Ralph? We hope you find this issue to your liking. Ed.

PERKIOMEN MUSKIES

I would like to express my sincere thanks to the Fish Commission. The Perkiomen was rapidly becoming a dormant stream, but since the introduction of the musky to its waters, the Perkiomen now offers to the fishermen of this area the opportunity to catch trophy gamefish.

I would also like to thank Francis Rotchford, Waterways Patrolman in Montgomery County, for his information on the future Perkiomen and Schuylkill River projects.

MEL SHEFFEY, Pottstown, Pa.

Spread the word Mel! There is good fishing available STATEWIDE—if only folks will seek it. Ed.

NO CONFLICT

I believe I may have some information which might be of benefit to some Pennsylvania anglers that fish in the State of Delaware.

I have fished (fresh water) in Delaware since 1935, and as a consequence, have one of my boats registered there. The Delaware license is renewable every April, and when I received my 1972-1973 stickers, I also received a notice of a drastic change in the Delaware boating laws, effective January 1972.

Since I know a lot of fishermen whose boats are registered in Pennsylvania take them to Delaware, and probably have no way of knowing of these changes, I am giving them below in the hope of avoiding disappointment and possibly a fine.

1. All vessels will carry on board one Coast Guard approved type life jacket or life vest for every person on board. (Life cushions are not acceptable in Delaware).
2. All motorboats will carry on board at least one (1) B-I Coast Guard approved type fire extinguisher, regardless of construction of vessel.
3. All motorboats will carry at least four (4) distress flares, two (2) to be smoke and two (2) to be illuminating.

This means that even in a rowboat without a motor one would have to have a LIFE JACKET OR VEST FOR EVERY PERSON ABOARD.

It probably means that even in an electrically propelled boat the regulations in #2 and #3 would apply.

An inquiry by a friend (a Delaware resident), as to whether these regulations would apply on small inland ponds brought the reply that they would. I am one hundred percent for water safety, but after so many years of Coast Guard approval, one wonders why life cushions are no longer acceptable in Delaware, and what effect the Delaware regulations will have upon neighboring states, including Pennsylvania.

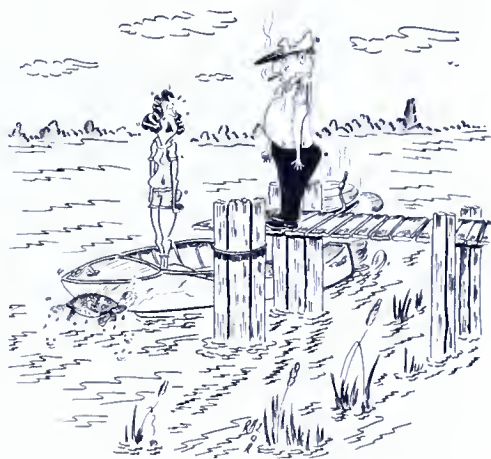
Perhaps a notice of the above rules printed in the Angler will enlighten some Pennsylvania fishermen.

WILLARD F. TOWNSEND,
Harleysville, Pa.

According to officials of the Delaware Division of Fish and Wildlife, the new Delaware boating regulations will not be enforced for operators of boats registered in Pennsyl-

vania. Regarding the requirement for an approved lifesaving device for each person aboard every type of watercraft, this requirement is the law on all federal waters as of 17 April but Coast Guard approved buoyant cushions are acceptable on all Class A and Class 1 boats on those waters. We hope this same requirement (which will also accept approved buoyant cushions on the smaller boats) will soon become the law on Pennsylvania waters also. The prohibition against buoyant cushions (regardless of size of boat) and the other two new regulations mentioned by Mr. Townsend affect *only boats registered in Delaware*.

CAPT. CHARLES E. LEISING,
Director
Bureau of Waterways



WHAT'YA MEAN HE HAD THE
RIGHT-OF-WAY?

REAL EEL PEELER!

Your story in the March issue. The Incredible Eel, by Tom Fegely, was the best I ever read about the Eel. I had a bungalow on the Delaware River above Easton, Pa. and had often watched the small eels come up the river, they hugged the river bank on the shallow side and were about 3 to 4 inches long. In fact the wash from a motor boat often washed them up on dry land, and they had to wiggle back to the water.

I found it much easier to skin and clean an eel by putting sand on a board, rolling the tail of the eel back and forth until the skin is shredded. Take shredded parts of the skin and pull down holding the tail by the other hand. It had been proven that you can clean three eels to one by using this method.

ARTHUR T. HOWEY, Slatington, Pa.

Re-eely? If I ever enter an eel-skinning derby, Art, I'll give it a try! Ed.

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"FISHING" With A Camera

by Richard F. Williamson



Through the magic of photography, a vacation that lasts only for a week—or for that matter just one day—can provide a lifetime of pleasant memories.

Beautiful spots along a river, creek or lake can be recorded permanently on film. The memories of companions "in action" can be captured for all time in snapshots, color slides, or movies. Big fish can be caught, recorded on film, and then released to provide sport another day. Boating experiences and travels can be shared with friends with the aid of a camera.

On a shelf in my den are 25 metal boxes, each containing 150 color slides; five metal cans, each holding twelve 200-foot reels of color movies, and two big albums filled with black and white snapshots. More than half of all of them were made on fishing trips. It has been my privilege to share those slides and films with dozens of friends over the years, and I have spent many hours, sitting at home on cold winter evenings, while those pictures revived happy memories of the occasions on which they were made.

Let me share some of them, verbally, with you. One is a picture in color and 8 x 10 inches in size of a friend holding a four-pound bass taken on a surface plug. Another is of a couple of buddies caught in the act of catching large and scrappy bluegills on small poppers. A third is of a fabulously colored brook trout, lying on a patch of grass beside a fly rod.

Pictures in the albums, incidentally, are in black and white and were made years ago, before taking color pictures and making color slides and movies were made easy by the development of modern cameras and film.

Taking pictures is a very simple hobby, but a word of caution is in order. Extremely cheap cameras do not produce satisfactory results. They may be good enough to take pictures of a general nature, but details will be lacking. It is possible, however, to buy (for a modest price) a camera that will enable the user to get close to his subject and make pictures that catch the eye and really tell the story.

Even modestly priced cameras have electronic devices that control lens openings and make light meters obsolete. Other features are view-finders that "see" through the lens opening and split-image range-finders that make sharp focusing easy—very important when taking pictures of (or from) a moving boat.

Inexpensive close-up lenses (sometimes called portrait attachments) that can be attached to most still cameras and zoom lenses for movie cameras make close-up pictures possible without complicated camera adjustments.

Films of today have far wider range and greater speed than those of a generation ago. Cameras are light and compact and easy to carry as well as simple to operate. Films for both still and movie cameras are sold in cartridges that can be simply snapped into the camera and as easily removed when they are exposed.

The amateur outdoor photographer should keep his camera as simple as possible. There are few occasions when the photographer has time to make elaborate camera adjustments before shooting a picture or a movie sequence. A fighting fish will not wait, and an angler is reluctant to hold still, in the midst of a battle with a fish, for the photographer to fiddle with gadgets on his camera. A skier, cutting through a boat's wake can't "hold it"—*you* have to be ready!

It's a rule that the simple camera also is a camera light in weight and small in bulk, which are assets any fisherman will appreciate. A metal camera, rath-

Get as close as your camera will permit. Close-ups include all the details you'll want to remember.





A good photograph will bring back pleasant memories for years to come. (photo by Thad Bukowski)

er than one made of plastic, is obviously best for use in the outdoors, and it should be in a protective carrying case. Films, even those in light-tight cartridges, should be protected against heat and dampness. Exposed film should be processed as soon as possible.

The type of camera you buy is a matter for you to decide, of course, and a conference with your photo dealer will guide you to the type of instrument you need, at a minimum of cost.

What should your pictures show? The river, creek or lake on which the fishing or boating is done, of course. But be sparing with those broad vistas that show a vast expanse of water in the foreground and a horizon of trees in the distance. Concentrate, instead, on pictures of small areas that will truly depict the scene—the corner of a bed of blooming water lilies, for example; or a majestic tree leaning out over the water, a waterfall or rough rapid, a cove with “drowned” trees standing naked in the water, a shoreline cove with stump-filled water. A close-up picture of a five foot square area of such a spot is far better than a wide view that discloses no details.

Take enough pictures to establish the location and the beauty of the water—and then go after pictures of

Wide angle lenses, either in the older turret mounts or the newer zoom type permit “shooting” in close quarters.



fishermen, other boaters, or a skier in tow.

A big bass sagging the mesh of a fishing net makes a fine picture. A pike lying exhausted beside a boat before it is released can stay alive on film. A couple of fat walleyes on a stringer can make a picture that will always recall fishing thrills. A skier, poised for take-off, (or drenched after a spill) is a good subject for some memorable snapshots.

Of course, you will want to take pictures of friends holding nice fish. Have your subject hold the fish horizontally above waist level or perpendicularly with its head about six inches below his chin—and then move in as close as your camera will permit. After all, the fish and your friend's happy face are the subjects and the only details that really matter.

If you want a picture of a fish alone, pose it carefully. Lay it on its side on a slab of rock or a tree stump or in a patch of grass and put some object—a cap, a landing net, or the butt end of a rod with reel attached—that will provide a measure of its length beside the fish. Again, move in as close as your camera will permit before you snap the shutter.

Action pictures pose a more difficult problem, but not one that is impossible to overcome.

Most movie and still cameras have a focus range that makes it possible for a person in one end of a boat or canoe to take pictures of his companion at the opposite end of the craft. If a fishing party is involved, it is easy for a fisherman in one boat to take pictures of anglers in action in another boat nearby. Or the photographer can step ashore and from that vantage point take shots of his buddy fishing just offshore.

A fine movie can be made by wading close to a companion fishing a stream—particularly fishing a mountain brook for trout—and taking a sequence of his casting and (if he is good or lucky) catching trout.

Sure, using the methods just described requires a lot of self-control on the part of the angler-photographer. He must be willing to lay his own rod aside for a while and concentrate on his companion's fishing. Actually, though, that is a small sacrifice. An hour or so taken out of a day's fishing is not too high a price to pay for fishing memories on film.

The end of a trip also provides opportunities for pictures. One of my films that I delight in viewing (and that has proved to be a great favorite among my friends—even those who do not fish,) shows the preparation of a shore dinner. It begins with footage of filleting a bass and starting the cooking fire, continues through the cooking of fish, potatoes and beans and making coffee in a fire-blackened pot to the final scenes of three plates heaped with mouthwatering food and hungry fishermen demolishing these goodies.

Still another, taken with a movie camera set for slow motion, shows a friend cleaning a catfish in his own peculiar manner.

Actually, the photographer's only limitation is his own imagination.

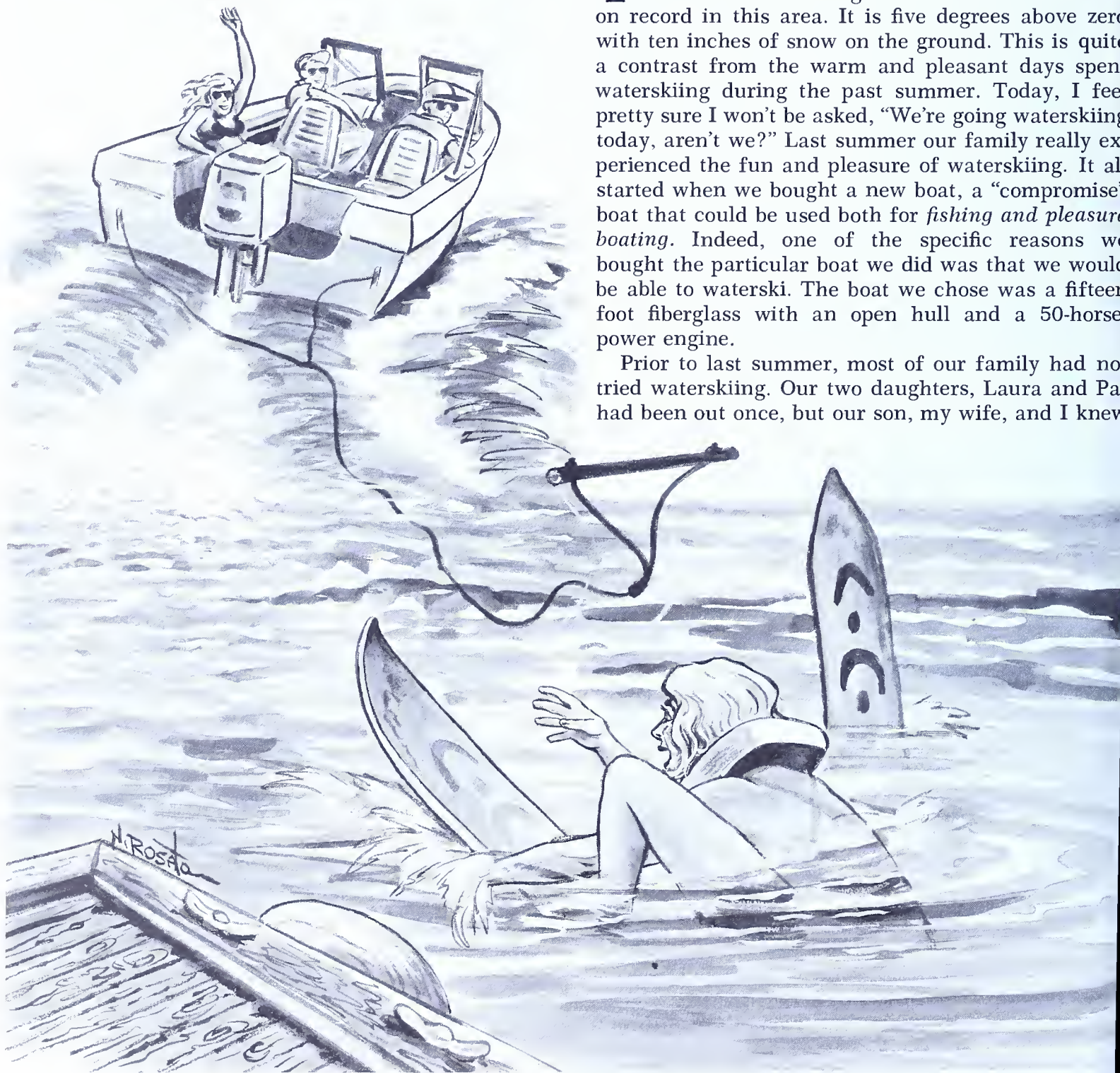
continued on page 40

We're going Waterskiing Today . . . Aren't We?

by George S. Morrison

This is being written in the midst of what the weatherman is calling one of the coldest winters on record in this area. It is five degrees above zero with ten inches of snow on the ground. This is quite a contrast from the warm and pleasant days spent waterskiing during the past summer. Today, I feel pretty sure I won't be asked, "We're going waterskiing today, aren't we?" Last summer our family really experienced the fun and pleasure of waterskiing. It all started when we bought a new boat, a "compromise" boat that could be used both for *fishing and pleasure boating*. Indeed, one of the specific reasons we bought the particular boat we did was that we would be able to waterski. The boat we chose was a fifteen foot fiberglass with an open hull and a 50-horsepower engine.

Prior to last summer, most of our family had not tried waterskiing. Our two daughters, Laura and Pat had been out once, but our son, my wife, and I knew

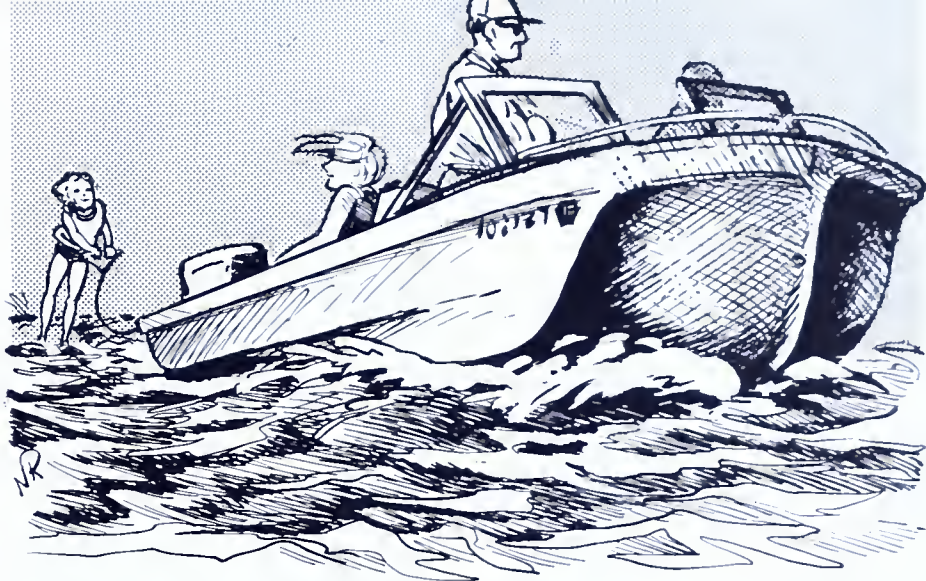


very little about the sport. Although we talked to quite a few people about waterskiing, we certainly proved that the old adage—"you learn by doing" is true. A person may feel that he knows how to do something without doing it, but generally he doesn't really have it figured out (and he only knows this after he has tried it!) So there was really nothing for us to do but learn waterskiing by doing it ourselves. Our original plan was to take waterskiing lessons from a local outfit that just started in business. The rationale for this was that if we were going to do it, we might as well learn the right way from the beginning. We also felt that there would be obvious advantages in learning from people who were supposedly "experts". However, by observing others waterskiing, we decided that we would learn on our own, as a family, how to waterski.

So, learn to waterski on our own we did! It wasn't really as hard as I had anticipated. The only thing was, I often felt that maybe I was doing something wrong or maybe I should have been doing something that I wasn't doing. However, I felt pretty confident that I was following all of the necessary water safety regulations and rules of the road because I had read the pamphlets and regulations put out by the Pennsylvania Fish Commission's Bureau of Waterways. I also talked with our local waterway patrolman who proved quite knowledgeable and informative.

We purchased our boat in early May and needless to say, the children were anxious to get in the water. However, in Northwestern Pennsylvania, it takes good waterskiing weather a little longer to come than in other parts of the state (I'm sure this isn't just my imagination). It seemed as though the "right" day would never come. However, it did come and out we went on the lake. To say that everyone was excited would be a gross understatement. Everyone was just about bursting with the thought that this was really it. One of the first decisions that had to be made was who was going to be first. I decided rather dictatorially that since Laura was the oldest, she would go first. The first thing I did was to find as quiet a place on the lake as possible. I looked for a place where there wasn't a lot of traffic from other boats—and one that was not a prime trolling area. I felt that I would have enough problems without worrying about other waterskiers and fishermen.

Laura securely fastened her white waterski jacket and jumped into the water. Next the skis were passed to her, she adjusted the bindings and slipped them on. The tow rope was tossed to her, she grasped it securely and put it between the skis. When she felt she was ready and when she looked ready to go, (low in the water, skis together, arms flexed) I opened the throttle and off we went, only without Laura! Fortunately my wife was our "competent observer" and she relayed the news that our waterskier was not with us. I turned as quickly as possible and brought the tow rope around for another try. We didn't keep track of the number of tries, but finally we made it and a loud cheer went up from everyone. I should note



here that simply because a waterskier does not get up in the water, does not mean it is the skier's fault. I found that one of the things I was doing wrong was not opening up the throttle enough—or fast enough—during the initial start! I had been advised to "hit it hard" in order to "pop" the skier out of the water but I really didn't think that meant giving it *everything it had!* I was "laying back" and not doing what I was supposed to. In addition, I was slowing down much too soon once the skier was out of the water. This slow down allowed the skier to fall back into the water. (After, the girls learned to ski, they didn't want to slow down!).

When Laura was able to stay up for some distance, it was Pat's turn. By practicing my boat handling on Laura, and with Pat watching and learning from Laura's mistakes, she was able to stay up almost from the beginning. In fact, Pat became adept with two skis so quickly that she soon abandoned two skis for one! I don't think that after the second time out, Pat use more than one ski, and she has become our slalom expert.

Our ten-year-old son, George, spent a great deal of his water time on a zip-sled. The zip-sled is very much like a surf board but it is towed on the water. The person on the zip-sled can lay down, sit, or stand up. While it can provide a great deal of fun for everyone, it also provides a person with the confidence he may need in order to go on and try waterskiing. I did find, however, that it takes a lot more power and therefore, gasoline, to pull a zip-sled than it does a waterskier.

The majority of the equipment I felt we needed for waterskiing was purchased at the same time we bought our boat. This included a pair of waterskis, ski vest, tow rope, and boat ladder. The purchase also included a mirror for the boat. I was under the impression that a mirror on a boat would provide just about the same image that a mirror on a car would provide. Needless to say, I was mistaken. My experience was that it was almost impossible to judge the distance of another boat from the rear of our boat with the use of the mirror. As for seeing what is behind you and knowing what is going on, *I don't think*

continued on page 33



BACK POCKET BASS KIT

by Tim Coleman

Unburdened by a mammoth tackle box, the angler who travels light is free to concentrate on technique and will spend more time fishing and less time changing lures!

The full-color photo proclaimed, "Lures for the largemouth fisherman". The picture showed a grinning enthusiast hefting a bragging-size bigmouth. Directly in front of him was a tackle box which resembled a small trailer without wheels. Inside this aluminum Noah's Ark were displayed two of every imitation creation known. Some plopped or crawled, while others wriggled or sputtered. On top, or in the depths, they all did their stuff. Hopefully, they would satisfy the hunger cravings of the bass. Realistically, their sales feed the cash register.

Does a knowledgeable bass man really need such a titanically-stocked tackle box? Well, on a given day when the baffling bass have eyes for a medium-diving, pink-and-purple-figmo only, he'd be better off with one. But, on a yearly basis, I'd give a definite NO as to whether or not he'd need all those lures.

First off, I have neither the money to stockpile such monstrosities, nor the inclination to tote one around when fishing. Instead, I like to have everything in a little case that fits neatly into my back-pocket.

What's in the little case? A couple each of two different type lures, a few different hooks, and a package of split shots.

The first of my mainstays is one of those floating, diving, minnow-type plugs. In recent years many have been offered. These are made either of lightweight wood or moulded plastic. I've seen all types, sizes, and color schemes of both the originals and the imitations take bass. What separates them from other plugs is their erratic flutter along with the flash finish. Personally, I've never had any regrets sticking with one of the plastic originals which is 4½ inches long. To me this most closely resembles a lot of the baitfish that bass feed on.

The second is the rubber worm. If I only had one lure to use, this would be it. When it comes to artificial versus natural, nothing looks more alive in the water than this. The seductive wiggle of the worm has been equated with doomsday for many a fish. I dislike those ready-made creations with three hooks, spinners, and beads! All that excess strangles the action, and hence the effectiveness. I favor six-inch worms, rigged on a snelled, bait holder, claw-style, No. 2 hook. The leader is a little insurance against whatever the worm might come in contact with, the bait holders keep the worm from slipping, and the claw-style has more penetrating power than other varieties. I run the hook through the first inch of the worm, and then bring it out. If the watery neighborhood to which the rubber squirmer is about to visit is congested, then I substitute a weedless hook, same

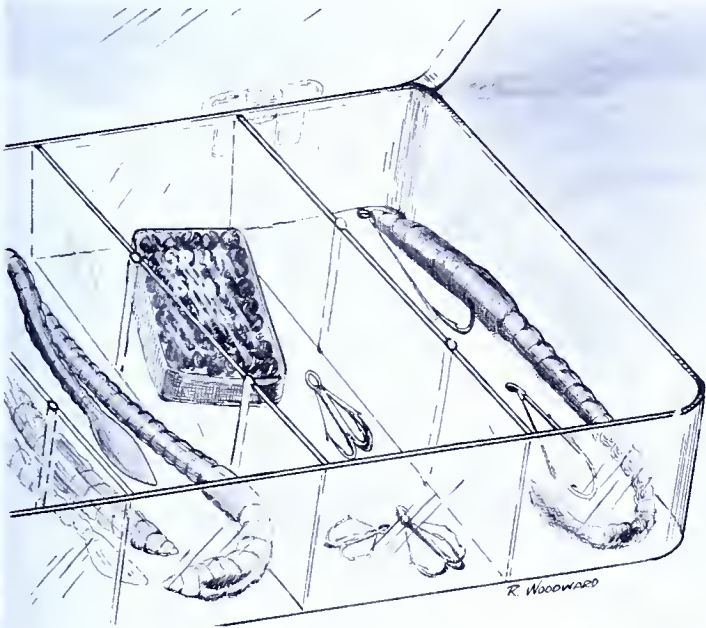
size and style. I like black or purple worms, but as with the plugs, have seen all colors work.

The last two items in the case are a package of big split shot, and some weedless treble hooks, the same size as those on the plugs.

With this limited tackle assortment anybody, can catch bass—anywhere!

What kind of previously administered acid test stands ready to back up such a statement? Well, my little kit has come through the paces smiling in such widely scattered states as New Jersey, New Mexico, and Wisconsin. In our own state, the same has gotten the job done in such places as Pocono Summit Lake, Brady's Lake, Gouldsboro Reservoir, and Pocono Lake in Monroe County. In Berks County, its been effective in Maple Beach Lake (Bristol), Churchville Reservoir, and Neshaminy Creek. And in Springton Reservoir in Delaware County. I think that's a pretty fair listing of some accomplishments—with the list growing all the time.

Even a net won't catch fish, unless it is used right. Ditto for these lures. Take the plug first. It's meant to imitate minnows, which is what *you* must do with it. Watch a perch or a shiner the next time you see one in its death throes on top. Notice how it flips and flutters, sending out little concentric circles in the water. When its energy is momentarily expended, it will pause and lie still, then try unsuccessfully to dive, and come floating back to the surface again.



Make your plug do likewise. A healthy bait fish will swim along, then dart here and there, flashing its sides as it goes. Observe, and copy that action with your lure.

How about when the fish are down below the plug's diving range? Take an idea from the troller. Add enough weight to sink the lure, and start fishing. The split shots take it down, and the buoyant lure rides up off the bottom. How deep can you go? I've taken bass on the bottom of a Bucks County lake when a spillway marker was registering 32 feet.

How about back on top again, only with stumps, lily pads, and what-have-you present? Replace the regular hooks with those weedless trebles. Now the lure can go anywhere.

Incidentally, don't be surprised if a toothy snout tries to inhale one of these lures. One morning, a few years ago, in Gouldsboro Reservoir a musky decided that my weedless offering, flashing around the edges of the stumps, was something that should be included in his breakfast menu.

In running water, either on top, or down deep, you have the added help of the current in working your lure. Last year, on Neshaminy Creek below Route



263, a friend of mine used it to his advantage, and we discovered that portion of the creek contained bass.

Anything you can do with the plug, you can repeat with the worm. Swim it across the top, with the rod tip held high; around, in, and over most obstructions with a weedless hook; or, "bounce the bottom," aided by split shots. Before you begin fishing, observe the lure in shallow water. Experiment with your rod tip til you get the most lifelike gyrations. Remember what you did, and do it again, only this time in deeper water, and in front of the bass. With the single-hook worm, you'll have to pause a slow five-to-ten count before setting the hook.

Some of the box scores for my two pets? The plug's biggest catch is 6¼ pounds, with the worms showing 5½ pounds. Best day I ever had with the worm was a believe-it-or-not episode that happened nine years ago. I had a day off, and went up to Churchville Reservoir. In one 7-hour session, several mauled black worms accounted for 55 bass (of which I kept one). Take it or leave it, but it's fact—not fiction!

The tackle shops have what you need. Your back pocket will hold what you buy. And the large mouth will eat what you present. Give it a try, and a decent chance. I don't think you'll go wrong—I know I haven't yet.

HOT WEATHER

B A S S



by John Weiss

illustrations: Linda Steiner

During the hot summer months of July and August, fishing for lunker bass is tough, even for the "pro's." The water temperatures are up and, like humans, the heat makes fish sluggish. We both want no part of strenuous activity, particularly heavy eating, and our only pleasure seems to be that cool, refreshing *anything* that detracts from the heat.

Most large fish will head for the cool solace of deep water, yet many will not. Fish also need those other critical components needed to sustain life, food and oxygen. And the deepest and coolest parts of the lake may not provide these. So when deep water fishing doesn't pay off, head back towards the shoreline, but take a few tricks with you. The time and effort will be repaid in accolades, and some bustin' size bass.

One place in which large bass will congregate in schools is at various locations around stream channels,

particularly where there is suitable structure to hold them, such as a sharp bend in the channel. These channels are your passport to good fishing. They are not necessarily found in the deepest water, and rarely are found in the middle of the lake. Stream channels usually run parallel to the shore and about 20% of the distance out from the shore.

Locating stream channels is easy if you possess an electronic depth finder. But this is not really necessary if you take your time and have a fair knowledge of the water you're fishing. We'll assume you don't have a depth finder and tackle the problem of locating stream channels by "working" for them. Remember, large fish congregate in certain areas for specific reasons, so take your time. If they're there, they'll stay there or return very shortly. Having maneuvered your boat into position near a location where you suspect the pre-

sence of a channel, sit back and relax a bit. Light your pipe and permit a brief period of time to pass to insure that your arrival hasn't disturbed the entire neighborhood.

Next, start casting in a complete circle around the boat in a rather systematic method and try to pinpoint the location of the channel. Big bass will seek out these channels which appear on the lake floor as depressions averaging three-feet deeper than the surrounding water. Deeper water may be found nearby, but seldom will it be moving water that oxygenates the area and provides a supply of food as does the stream channel.

My personal preference in locating these channels is a six-foot casting rod, with a free-spool reel loaded with twelve-pound mono. This lighter line will provide you with the long casts needed to search the area, and heavier line is seldom needed in open water that is relatively free of ob-

structions. With a heavy lure such as a jig, spoon, weighted plastic worm or other lure, bump the bottom all the way back to the boat. You'll be able to tell when you locate the channel as the line will take much longer to go slack.

If in your first attempt you fail to locate the channel, haul anchor and move, but *not* parallel to the shoreline. You have to pinpoint that channel which runs roughly parallel to the shoreline, so move about twenty-five yards further out toward the middle of the lake. Then resume your casting as you did in the past.

Once you do start to catch fish you can pretty well bet that you've found the channel, so mark the area for future reference, using the well-known triangulation method. If you are picking up only small bass, move again, but this time parallel to the shore to insure that you remain within casting distance of the channel. The oxygen content and food supply will vary even within the channel and therefore the big ones will congregate in certain areas.

Most types of baits and artificials will work well in stream channel fishing if you're able to imitate closely the natural foods most likely to be found in the channel. Crayfish, salamanders, minnows and other bottom dwelling aquatic creatures seem to produce the best results. If the water is murky I usually stick to yellow, white, silver and redhead colors. In clear water the oranges, browns, blacks, dirty whites and similar colors seem best.

If the fishing stops abruptly, glance toward the shoreline. If there is a small cove or other indentation present, it is likely that this is where the stream originated. Work the perimeter of this area carefully, gradually moving towards the source of the stream. Frequently you'll discover that these inlets are infested with brush piles, indicative of the busy work of beavers. Bass love these protected areas so switch to your heaviest tackle. You'll need it to pull them out of the sticks and into open water where you can play them.

If stream channel fishing doesn't pay off immediately, don't give up. More than any other single reason, boredom and disinterest are probably the two factors most responsible for anglers giving up and going home. You must think positively and each cast must be carefully worked and thought to have a lunker eye-balling

it all the time. The surest way to cure boredom is to switch your fishing style, using a spinning rod instead of a casting rod, working a wobbling spoon instead of a plastic worm, casting toward deep water rather than toward the shoreline. All these slight variations will keep your interest up and increase your chances of catching fish. Worked an area thoroughly and still no luck? Give it a rest and return in the evening or the next morning. The key to hot weather fishing is *persistence*!

If you do possess a fish locator or depth sounder, you can spend some time motoring around the lake in search of other underwater structure that is likely to draw and hold large bass in the hot summer months. On an otherwise level lake floor I once found a rocky fault no bigger than a bathtub, yet it was about ten feet deeper than the surrounding water. From this small area, that had water temperatures ten degrees cooler than nearby water, I pulled out eighteen bass that weighed up to four pounds. Of course, I kept the three largest and released all the others.

And another time on an otherwise level lake floor in fifty feet of water, I located a submerged island that stuck up from the floor by about eight-feet. Big bass were taken here though nearby water was barren of any fish at all. Except brief periods during the spring and fall, large bass will school together.

Another summer tactic is to seek out big bass that are suspended over deep water. In most deep lakes the hypolimnion, or that stratified layer

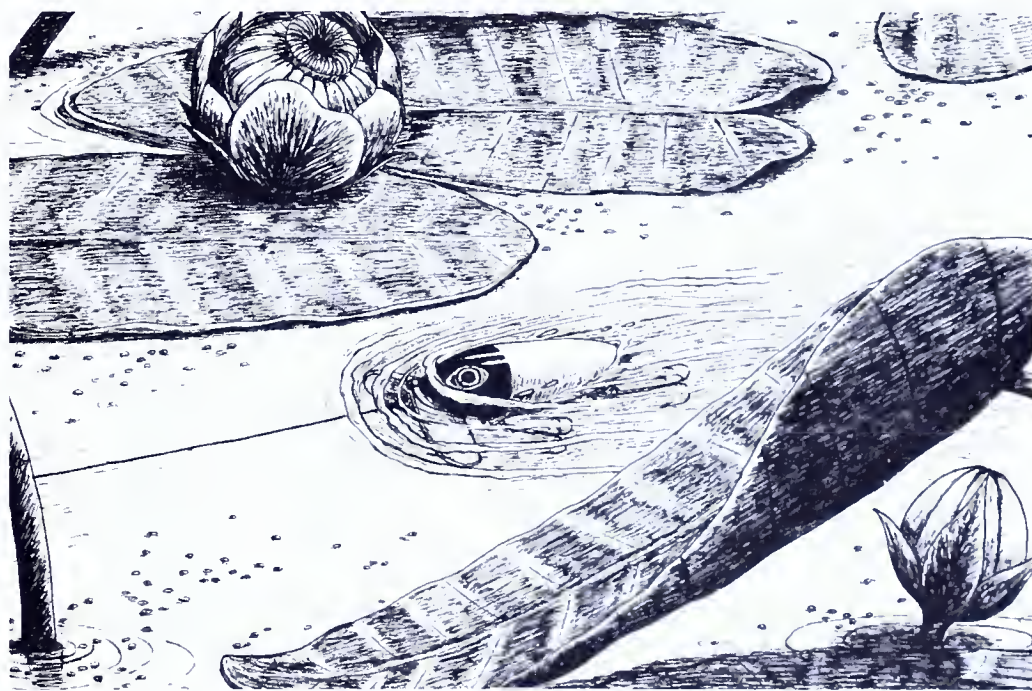
of water directly beneath the thermocline, is void of sufficient oxygen. Experiments have proven that fish lowered in wire cages to the hypolimnion will soon die, sometimes even faster than if they were taken out of the water completely. For this reason, large bass will remain suspended within the thermocline, usually hugging its lower limits, which is ordinarily at depths of 15 to 25 feet.

This may explain why your education on bottom-bumping techniques with plastic worms and jigs has many times failed to produce results. You were fishing in the hypolimnion where you had no chance of catching a single fish. Of course, in lakes that are too shallow to stratify into the three distinct layers, bottom bumping, especially around stream channels, is often your best bet in hot weather.

If the lakes you fish have an average depth of more than thirty feet, and possess little structure such as weed beds, submerged brush and the like, the big bass will most likely be suspended over deep water. They will be "floating" at rest at the depth that is most comfortable to them and this is many times directly below schools of small baitfish. A thermometer of sorts, will give you temperature readings at various depths and help you pinpoint that depth most preferred by big bass. Although bass will tolerate temperatures of from 65° to 75°, they seem to prefer about 70° water and will seek this out.

I've found the best approach to this type of fishing is by trolling. Say for example you find the water tem-

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You can make "on-the-spot" repairs
with a —

PRIMITIVE PATCH

by Keith C. Schuyler



Above: Indian chops loose resin blisters to make pitch for canoe repair.



Above: Jacko blows through suspected hole to be sure he has right spot.

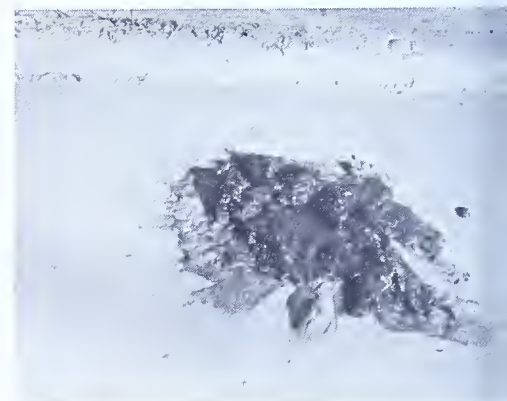
Below: Birch bark is burned over patch area to ensure that it will be perfectly dry since canoe was just pulled from water.



Above: Resin is mixed with butter and boiled over fire. Mixture is constantly stirred to reach right consistency.



Above: Stick is used to spread material over hole in canoe.



Above: Messy mixture has small pieces of bark in it which causes lumpy appearance.



Below: Heated wire is used to smooth out patch over damaged spot.

Modern adhesives have solved many problems relative to boat damage. However, they are not always available. Northern Indians find the old ways still practical, and they don't worry about carrying along a repair kit. As illustrated here, patching a canoe is a minor feat for one with the know-how.

Some years ago, a friend rubbed two holes in his boat when it fit imperfectly in its trailer cradle. He told me how the Quebec Indians made a quick and effective repair.

Consequently, when our canoe struck a submerged snag of rock, I told our uncommunicative Indian guide, "You fix." Jacko nodded, to conserve the few words of English he had mastered, and he "fixed".

Picking up a tin can and his hatchet, he went directly to a spruce at the center of the island on which we were camped. It showed signs of having been previously wounded with a blade to make it bleed the pitch used in canoe repair. This and other trees yielded half a canful before Jacko was satisfied. He took it back to camp where he mixed in a two-inch square of butter to give the pitch an adhesive quality, then boiled the brew over our camp fire.

After blowing on each suspicious jag in the canvas canoe covering and satisfying himself which jag was guilty, Jacko wiped the area clean and then burned birch bark on the spot to ensure absolute dryness. After the brew was well cooked, he spread a liberal supply over and around the hole. Somewhere he found some heavy wire which he heated to spread the pitch smoothly as possible. As soon as he had the job completed, the canoe was returned to the water. It served without any problems for the next seven days.

Governor Milton J. Shapp

Proclaims

July 2 - 8, 1972

SAFE BOATING WEEK

"Once again this year over one million Pennsylvanians are enjoying their leisure time on the beautiful and bountiful lakes, rivers, streams and tidal waters of our Commonwealth.

"Each year there is a tragic and unnecessary loss of lives and property as the result of boating accidents. In almost every instance, the victim had no boating safety education, and the cause could be traced to a basic lack of knowledge of boating hazards. The Pennsylvania Fish Commission, the Delaware River Marine Police, the United States Coast Guard, the United States Coast Guard Auxiliary, the United States Power Squadrons, the American Red Cross, the River Rescue Units, and many sportsman and boating groups offer fine courses in Boating Safety.

"Pennsylvania has long had the reputation of being the 'Safe Boating State.' We must be continuously diligent in our efforts to retain this renowned reputation. The Pennsylvania Fish Commission, through its Bureau of Waterways, is actively engaged in programs of development of water access areas, safety education and sensible law enforcement and in co-operation with the Department of Environmental Resources, through its Bureau of State Parks, the continuing development of water recreation areas.

"Therefore, I, Milton J. Shapp, Governor of the Commonwealth of Pennsylvania, do hereby proclaim the week beginning July 2, 1972, as SAFE BOATING WEEK in Pennsylvania and strongly urge all who boat upon our waters to boat wisely and courteously, to prepare for safety through education, and to preserve our waters for those who come after us.

"GIVEN under my hand and the Great Seal of the State, at the City of Harrisburg, this eleventh day of May, in the year of our Lord one thousand nine hundred and seventy-two, and of the Commonwealth the one hundred and ninety-sixth."

MILTON J. SHAPP
Governor

In the photo, right, are just a few of the fifty boating administrators and enthusiasts who witnessed the signing of the Proclamation. Governor Milton J. Shapp, center, is flanked by Rear Admiral Benjamin F. Engel, USCG, Commander Eastern Area and the Third Coast Guard District on his right, and Howard R. Heiny, Vice President of the Pennsylvania Fish Commission, commissioner-at-large representing Pennsylvania's boaters, on his left.

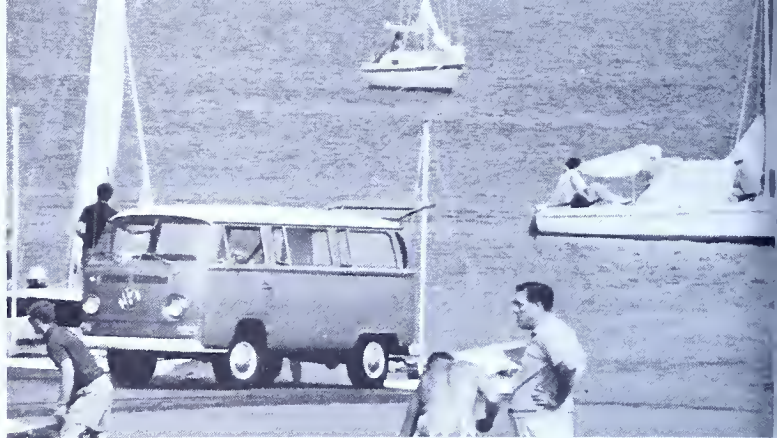
Standing, left to right: Charles L. Chattaway, Chairman of the Boating Advisory Board, Thomas A. Gangewere, immediate past chairman, Capt. C. E. Leising (USCG Ret.) Director Bureau of Waterways, PFC, Ralph W. Abele, Executive Director of the Pennsylvania Fish Commission and Senator Donald O. Oesterling, Majority Caucus Chairman.

Also present at the signing were representatives of the U.S. Coast Guard, the Coast Guard Auxiliary, the U.S. Power Squadrons, the Red Cross, the Pa. Federation of Sportsmen Clubs, the U.S. Forest Service and the River Rescue Squads.





Above: Walt Wesner of Pittsburgh, giving Moraine Sailing Club "skippers meeting" before a sailboat race gets underway.



A SAILOR'S

One of the newest and largest lakes in Pennsylvania is only two years old but already 145 families have joined the Moraine Sailing Club for action every weekend on the 3,225 acres of water. Lake Arthur, located between Butler and New Castle, off U.S. 422, has become a sailor's paradise.

It is not uncommon on a weekend to see 200 to 300 sailboats on its windblown surface. Beginners added new outfits to the waters almost every day last summer and bustling activity always occurred at the Pleasant Valley Day Use Area and at the Public Boat Access at the Marina. During the Governor's Cup Race run last May, 98 boats participated.

The booming Moraine Club had to go to Portsmouth ratings for racing to accommodate its mushrooming boat fleet. The rating places boats into categories according to size of boat, size of sail, size of hull, length, width of beam and sail area and "A" and "B" fleets have been created. The "A" fleet races on one weekend and the "B" fleet races the following.

Races include "handicap" events in which all boats of one fleet compete against each other with a mathematical formula determining the winner. Handicap races occur when boats are orphaned without similar types available for competition within a class. "Class" races are also run and pit boats of one class with others of its class.



Above: Committee chairman at starting boat, calling out to boats with the aid of a bullhorn.

Below: Windmills as they passed starting buoy and committee boat as their class began race.





Launching area becomes busy prior to regatta at Bear Run

PARADISE

Thad Bukowski

Fastest boats initiate races with 505's, or "Thistles," starting Moraine's "A" races. Registered boat numbers are shown on both sides of the mainsail. A paddle is a requirement for every boat as well as a life jacket for each occupant. Helmsmen must be the same during the race.

Race winners accumulate points through the season. First place is $\frac{3}{4}$ of a point; second, two; third, three; and there are as many points as boats involved in a class. Points are totaled over a season including up to 10 races. Boats not starting in certain races, or boats which have protests awarded against them, get points equal to the last finisher of a race. Competitors, however, are permitted to discard the points of their worst race at season's end and the competitor with the lowest accumulated point total is declared the winner. Trophies are distributed at an annual club banquet, and each class winner receives a trophy.

Getting set with a small boat and trailer costs a neophyte about \$1,000 while big boat minimums are in the \$3,000 category. Moraine Club charges \$7.50 for yearly membership and if members participate in races another \$7.50 per boat, per season, is the fee.

REGATTAS

If he wants to become a regatta participant, the sailor travels a triangular course. The start is into the wind at a committee boat, between it and a starting buoy. A white flag is raised at the 10 minute gun as boats of the class to race begin to jockey for positions in the area of the starting line.

Old timers "luff" (flutter) their sails to be near the line for a "full steam" shot at the start as it is particularly important to a good showing in the race. Stop-watches are used by veteran skippers to check off the final tickings so their boats hit the imaginary starting line at the proper moment.

The race committee decides the distance of the triangle or the length of the course on the date of the race. The wind for the day and weather conditions may be determining factors.

The first leg or windward course is about $\frac{3}{4}$ mile and is termed the "beat." The second leg is the "reach" and about 1 mile while the final leg or "run"



Above: MacDingys with crew members hiking out on the rail.

is also about $\frac{3}{4}$ mile. During the second leg, the wind is to the side of the boat and on the final "run" it is behind the boat. Boats must pass buoys at each designated turning point either to leeward or windward as designated by the race committee and come back to the same buoy from which the race began.

Races usually include travel twice around the course, morning and afternoon, with a shore picnic and relaxation included during the intermission. If the wind dies, the race committee may shorten the race to once around. Similar decisions may be made if a wind becomes treacherous. Gusty winds at times cause havoc with upwards of a dozen boats flipping at once. At such times contestants bail, then try to continue in the race.

If bad weather conditions and rough water prevail, a life jacket may be hung from the race committee boat at the start and if this occurs, all participants must don life jackets. Races usually begin at 10:30 a.m. and again at 1:30 p.m.

Protocol must be observed in racing. A protest may be lodged if bumping occurs, or if a boat "tacks" (changes course) too close to another. Protests are lodged with the race committee. Prior to protest, a protesting boat hoists a red flag on a shroud (cable that holds the mast up). The protest is formally written up describing the incident. The average number of protests are one to two per race and usually occur accidentally.

Below: View of the regatta from hillside picnic tables.



Boating's a Pleasure

in Pennsylvania —

THE SAFE BOATING STATE

by CAPT. CHARLES E. LEISING (USCG Ret.)
Director, Bureau of Waterways

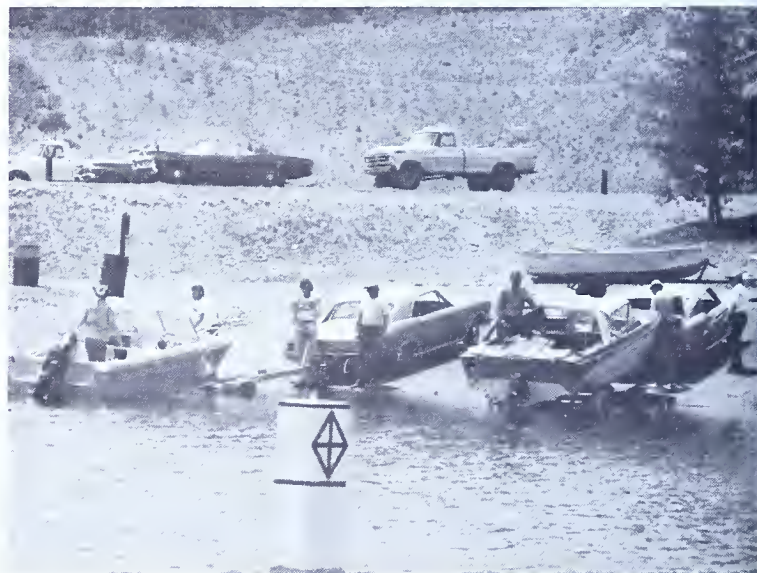
More boaters are on the waters this season than ever before. Pennsylvania boat registrations have increased over 11,000 to a population of some 120,000 motorboats. This does not include the many thousands of sailboats, canoes and rowboats that are not required to be registered. With the ever increasing population of boats in the State, the Fish Commission and the Department of Environmental Resources are working hand in hand to provide new access sites and additional water recreation areas. Fish Commission facilities operating for the first time this year include access areas at Amity Hall in Perry County, Levittown Lake in Bucks County, Montgomery's Ferry in Perry County, Lake Wallenpaupack's new ramp in Pike County, Tarentum in Allegheny County, Lake Walker in Snyder County, Linden Access in Lycoming County, Lake Winola in Wyoming County and Beltzville Lake in Carbon County. Other projects planned for the added enjoyment and safety of Pennsylvania boaters this year will be an access area at Leetsdale in Allegheny County, Kimmets Lake in Lehigh County, Phoenixville in Chester County, Oil City in Venango County and the installation of boarding piers at a number of our access ramps.

The Coast Guard Auxiliary, the Power Squadrons and the Red Cross report record student enrollments in their spring classes. The Fish Commission's Boating Pleasure Course attracted almost twice the number of students over last year. Perhaps the highly publicized threat of operator licensing had something to do with it. It has been reported that the Coast Guard has come out in favor of some sort of compulsory federal operator license. This is not entirely true. The Coast Guard has agreed to study the whole proposition of *voluntary* education vs. some type of *compulsory* education leading toward a certification program. The Federal Boat Safety Act of 1971 authorized the formation of a Boating Safety Advisory Council, and this newly formed Council has been assigned the task of investigating the subject.

The National Boating Safety Advisory Council (BSAC) is made up of some twenty one experts in the field of boating. This body is made equally of members representing industry, government, and the public. Their function is to investigate and recommend to the Coast Guard the need for regulations in a boating safety area which is particularly hazardous.



This fine access area on Lake Wallenpaupack, developed by the Pennsylvania Fish Commission in cooperation with the Pennsylvania Power & Light Company, offers free access to this boating and fishing paradise. Photos: courtesy PP&L.



Their first recommendation, which has now become regulation, will have a far reaching effect on many small boaters. This new regulation has to do with requiring that all boats have a Coast Guard Approved personal flotation device (life preserver) for each person on board the boat. Although, this federal regulation is applicable only on waters "subject to the jurisdiction of the United States"—such as the impoundments constructed by the Corps of Engineers

at Kinzua, Shenango and Beltzville plus all of the big rivers and Lake Erie—Pennsylvanians must be concerned because most of them boat on both state and federal waters. Hopefully legislation now pending will bring Pennsylvania law into conformity with the federal statutes so that regardless of which waters are being used, there will be a requirement for a Coast Guard approved life saving device for each person on board.

On 11 May representatives from all groups interested in boating safety gathered in Governor Shapp's office to witness his signing the proclamation for Safe Boating Week in Pennsylvania. Approximately 50 persons attended including members of the Coast Guard Auxiliary, the U. S. Power Squadron, the American Red Cross, members of the State Legis-

lature, and Rear Admiral Benjamin F. Engel, USCG, Commander Eastern Area and the Third Coast Guard District from his headquarters in New York. After the signing of the proclamation the group met for a light lunch and general informal discussion of boating safety matters.

A 30-minute TV program was taped at State College on 28 April and was presented by WPSX-TV in late May and will be presented again in early July on their regular weekly program *Rogandus*. This show is moderated by Fran Fisher and features Bill Coleman, Commander, Bald Eagle Power Squadron and Captain C. E. Leising, USCG (Ret.) of the Pennsylvania Fish Commission discussing equipment and operating requirements of special interest to Pennsylvania boaters.

PENNSYLVANIA BOATING ASSOCIATION

Commends Bureau of Waterways Director

RESOLUTION COMMENDING CAPT. CHARLES E. LEISING (USCG RET)

WHEREAS the Coast Guard is studying proposals for mandatory safety education of all boat operators, which it acknowledges is the equivalent of operator licensing, and

WHEREAS all boating authorities, including the Coast Guard, National Association of State Boating Law Administrators, and National Boating Federation, have repeatedly analyzed such proposals and as often rejected them as more likely to reduce safety afloat than enhance it, and

WHEREAS the Coast Guard has advanced no statistical evidence that such a program could reduce accidents, but the draining of funds and manpower from proven safety programs to enforce mandatory education could increase accidents, and

WHEREAS such a program, once begun, could not be abandoned, and all experience indicates it would degenerate into another tax gimmick, and

WHEREAS Capt. Charles E. Leising, Pennsylvania Boating Administrator and chair-

man of NASBLA's Operator Education Committee, is leading a campaign to avert operator licensing by substituting an enhanced voluntary safety education crusade on a national basis, and

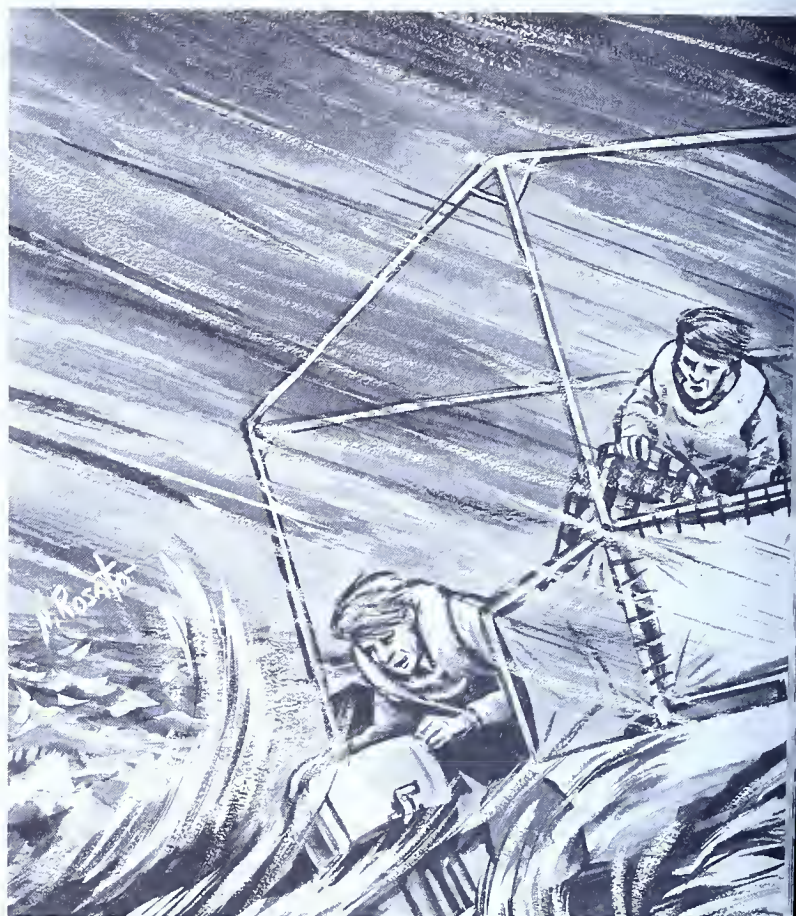
WHEREAS the Pennsylvania Boating Association and the National Boating Federation of which it is a member are both dedicated to safety education of boat operators on a voluntary basis, now therefore,

BE IT RESOLVED that the Pennsylvania Boating Association, in convention assembled at the Erie Yacht Club this 29th of April, 1972, commend Capt. Charles E. Leising (USCG ret.), Pennsylvania's Boating Administrator, for his efforts to develop a strong, coordinated National Safety Education Campaign that will reach every operator, novice or expert, on a voluntary basis, and that the Pennsylvania Boating Association offer to Capt. Leising its assistance in accomplishing this important objective.

HENRY K. KOCH, President

IT COULD HAPPEN TO YOU!

by Fred J. Zimmerman

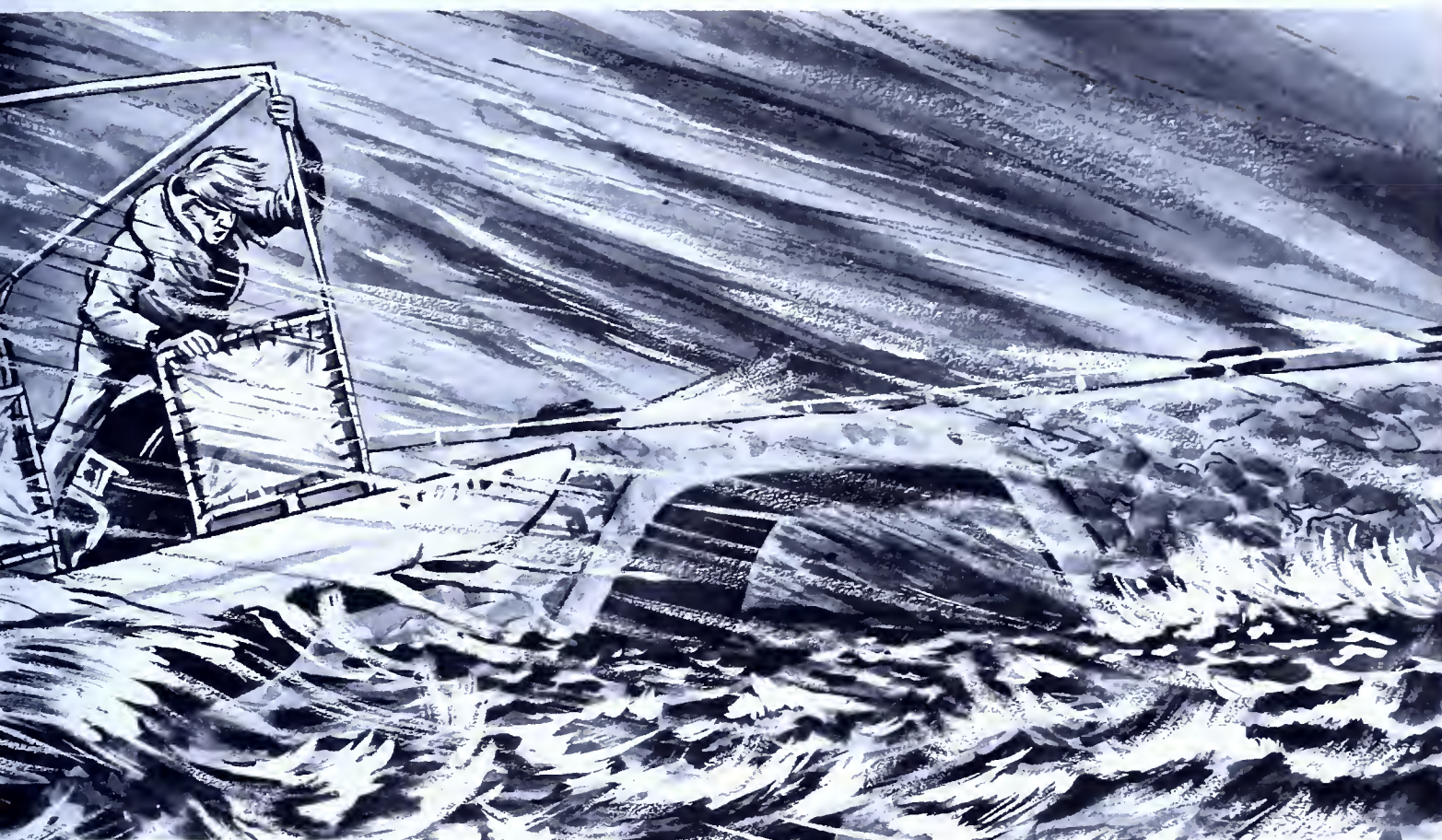


About six years ago a friend of mine, Walt Boehm, from the Carrick, Pittsburgh Eagles, went to Espyville, on Pymatuning Lake to our cottage to spend a few days fishing. Walt took his grandson who was about seventeen. Just the three of us.

We had a 22' float boat and a practically new 10 H.P. Motor. If the sun was too bright you could put the canopy up and troll or drift fish sitting in a nice chair on the deck.

We went down to the State Boat Livery where our boat was docked about 3 PM one afternoon. We talked with Bob Denmark who had operated the livery for several years, and by the way, he was the most friendly and cooperative person that I have ever met. The lake was beautiful and calm, but I still asked about a weather report. He said they had no reports of bad weather coming in, but he still checked on the telephone, and advised the weather report was good. We loaded our fishing tackle, half a dozen life jackets and fire extinguisher on board.

We ran out along the south side of the causeway and headed south toward Jamestown, Pa. I cut the motor to trolling speed and we settled down in some folding chairs for a nice afternoon of fishing. After about an hour and a half I noticed a few dark clouds appearing, coming in from the Southwest, but I still thought there was nothing to worry about. The water was still quite calm, but more dark clouds started coming and all at once a real stiff breeze hit us. I made a wide circle so we would not have to take our lines in and headed back north.



Very soon the waves were a couple of feet high and we reeled our lines in. Then the motor started to miss, and then stopped completely. I thought it was a "short," as the waves by that time were practically going *over* the motor. The gas tank was almost full. I worked with the motor and got it going, but hesitating. The wind seemed like a gale by that time, the waves higher, and so many black clouds that it was practically dark. The motor stopped again and I definitely could not get it started. I did not worry too much as the wind was taking us to the east shore, and I figured we could just beach the boat and tie it up. The wind was also taking us north at a good speed and we could see automobile lights on the causeway. Soon we were going to the west coast and at times just went around in circles—but we were still moving *toward* the causeway. I really began to worry at that point! We took the canopy down thinking that we could go under one of the bridges on the causeway. Again I worked on the motor but with no success. We put the life preservers on . . . two of them on Walt's grandson.

By that time it was as dark as the darkest night you ever saw. No cars were going over the causeway, **THE WAVES WERE GOING OVER THE CAUSEWAY!** We just hoped and prayed that the wind would change again. As a last resort, I got the flashlight—praying that it would work as the waves were coming over the boat. I pointed it toward the boathouse and flashed an S O S in morse code a few times. Soon we saw a boat coming across the lake. When he got close

to the boat I saw it was manned by Bernie Burger, the best man Bob Denmark had working for him. He threw a rope and we pulled his boat alongside. He carried a full tank of gas along figuring that was our trouble. He worked and worked with the motor. It was raining like a cloudburst, and the wind was like a hurricane. The motor would start and run for a couple of minutes then stall again. We would put the motor into reverse and take advantage of it when it did run, by backing away from the causeway. The boat from the livery broke the rope and the last we saw of it was when it went over the top of the causeway! We gradually kept going toward the Ohio side.

The wind seemed to shift from the east and we started for the Ohio side pretty fast. At the speed we were going Bernie told us to jump to the sides as we hit as the boat might turn completely upside down on top of us. We followed his instructions, but when we hit the shore we saw dozens of men in the water to assist us. Walt's grandson had gone through such an ordeal that he could not talk when a reporter from a Youngstown paper tried to interview him. We took him right to the cottage and put him in bed. It was after 11 PM. That was eight hours in all.

We were told the next day that what we had experienced was a tornado or cyclone that was building up in that vicinity. It moved north and went out over Lake Erie. You might recall some fishermen lost their lives who were out on the lake off Erie that night. This just proves that unforeseen elements can arise when we are on the water and *we cannot be too careful!*

THE MAN WHO HAD EVERYTHING

by George E. Dolnack, Jr.



A pickup truck of questionable vintage and a car to match rolled to a stop in a cloud of dust off the highway opposite the fisherman and disgorged a gaggle of revelry with an assortment of rods, reels and cartons. Soon they were on the stream laughing and shouting. Amid the hilarity, some began to fish while the younger ones amused themselves by tossing rocks into the water above the loud protests of their mothers. One of the men bedecked in brightly striped trunks and tennis shoes, who seemed to be the father of some of the children, waded into the water with a rod in one hand and a can of something else in the other and began casting about futilely.

They all soon tired of *fishing* and pulled in their lines. Then as if on cue, they leaped into the water and splashed about in their hiking shorts. It looked like a scene out of a comic strip where the feather merchants celebrated their favorite day.

"Catch any fish?" they yelled to the angler.

He waved to them and grinned but it was a little too noisy for him after driving 170 uneventful miles from his home near Pittsburgh to fish. He arrived in camp a short time before on this warm and fickle summer day that was caressed by an occasional soft wind that rustled the leaves and lightly rippled the water. It was now late afternoon and he looked skyward at the threatening clouds in the west that affirmed the weatherman's earlier prediction. He was looking forward to a week's fishing and relaxation on his favorite stream, the Driftwood Branch of the Sin-

nemahoning that held a special charm of all its own for him.

He liked to use dry flies but he wasn't a purist for he carried a small tin of meal worms with him as backup just in case he couldn't get the trout to rise. That is he had the meal worms if his wife hadn't discovered their hiding place in the refrigerator and given them the old heave-ho. Women, they just didn't understand about some things.

As soon as he had hit the stream, he noticed that there were a couple of other fishermen upstream from him so he decided to fish in the opposite direction. He didn't waste any time in tying a quill ginger to his leader and had been fishing about half an hour without raising a trout before the merry-makers intruded.

After watching the spectacle from his streamside vantage point for a while, he shook his head, chuckled and departed downstream from the din to pursue his avocation. As he fished, he cast upstream and watched the fly floating in the slow current. Eventually his leader caught a small twig on a dead branch poking up out of the water. The fly danced in the air everytime he attempted to unsnag it but finally the leader came loose and the fly fell to the water. It had no sooner hit when it was enveloped in an exploding shower of spray as a brownie nailed it.

When the trout struck, the fisherman was bringing

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KEYSTONE CAMPING

by Thad Bukowski

Camping is synonymous with "getting away from it all" but our writer takes us to Erie for a real change of pace. Far from "dead," Lake Erie can provide unmatched fishing excitement!

Erie Camping

If you are a dedicated camper and want the best smallmouth fishing, for real whoppers—bar none, head for the "open lake" at Erie.

On my last trip to North East, the small town bass headquarters east of the big city of Erie I connected with an 18 incher on my second cast. Within two hours three of us had over 20 bass and twice as many sheephead!

The sheephead, or fresh-water drum, steals any live bait you might use and commonly runs about 4 to 5 pounds with eight pounders not uncommon. It fights as doggedly as the smallmouth but without the latter's spectacular leaps, and if eaten on the same day, tastes just about as good. If kept longer, however, the meat gets very strong.

Two hours after we got out on the lake, we had our rented 9½ horsepower motor pushing our 14 foot, high-sided boat back as fast as we could to the dock. But we got drenched nevertheless.

Camping in the environs of Erie is somewhat better than acceptable with a sufficient number of small campgrounds abounding with plenty of shade and bucolic atmosphere, although usually in tight quarters. Most of the camps are two to three miles back off secondary macadam roads since Lake Erie's shore is a premium commodity. Pa. 832 which leads directly onto Presque Isle has at least four such camping areas including one on the sands of the beach just outside the Presque Isle State Park gate. The park itself permits no camping. Many folks, however, take their camper in for the day for picnicking activities and swimming, stopping at any one of the 11 big beaches.

Presque Isle is enjoyable to the fishing camper because he may make

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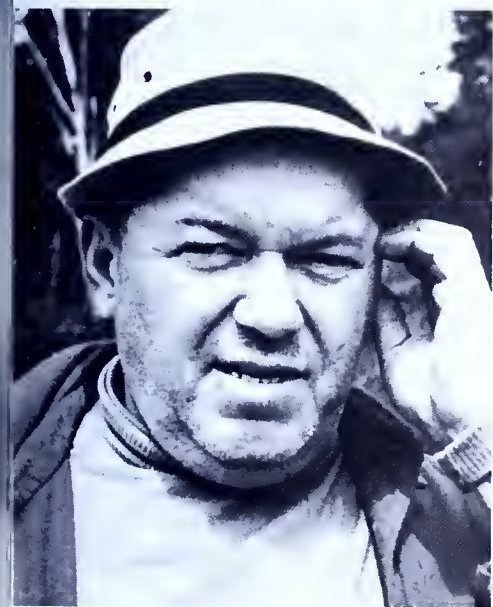


Above: Typical of the private camping facilities available near the city of Erie along Route 832.



Above: Jeff Bukowski disputes possession of a crawdad with a sheephead. A good fighter, it abounds in Lake Erie.

Below: Just one of the many side trips available at Erie. A trip to the beach is a "charge" for most anyone.



Bewhiskered and bedraggled, after spending three days of his first camping trip to Lake Erie sitting on a log watching the big waves roll in, THAD BUKOWSKI, our new camping columnist heartily recommends it nonetheless! Few folks have ever seen Thad in this unshaven state and we couldn't resist the temptation of introducing him to our readers in a typically camping condition.

Currently, Thad is serving as Director of Curriculum at the Shenango Area School System in western Pennsylvania but has been a writer and photographer for the last thirty years. For the last 13 years he has written a weekly outdoor column for his hometown newspaper, The New Castle News. He is a member of the Pennsylvania Writer's Association, Outdoor Writers of America, the Association of Great Lakes Outdoor Writers, and the National Freelance Photographers Association. He has camped, fished, and boated throughout the United States and Canada and brings to the pages of the Angler a wealth of "Try this, I have" information.



ANNUAL CLEANUP

The sportsmen of Lebanon Co. are indebted to Boy Scout Troop 48 of Palmyra for taking their time to clean up the litter along the Swatara Creek at Harpers. In two hours they picked up over a half ton of litter—mostly beer cans.

Also, the Heidleberg Sportsmen's Association for their annual litter clean-up along the Hammer Creek. This club does this to keep this stretch of trout stream open to public fishing. I would like to extend my personal thanks to these groups who are proud enough of their country to humble themselves to clean up someone else's garbage.

Paul T. Hornberger
WWP (Lebanon County)



YOU NAME IT PAL, I'VE CAUGHT IT!

TROUT IN FINE SHAPE

I have received many fine comments on the size and good condition of the trout the Commission is stocking this year from those who have been assisting with stocking the fish. The waters were in good shape last spring and all indications are this should be one of the finest trout seasons in many years. In addition to the Commissions regular pre-season stocking of County streams, three CO-OP nurseries in the County will add over 30,000 fish to county waters. A fine job and a lot of hard work by area sportsmen should really be appreciated by all fishermen.

Roymond Hoover
WWP (Tioga County)

MONEY IN THE BOX!

While on routine patrol of Clarks Creek near Dauphin one Saturday morning, I observed a teenage boy walking along the road and along the creek picking up bottles and putting them into a large cardboard box which he was carrying. I stopped to talk to this young man and asked him what he was doing and if he was working with some club or organization on a cleanup project. He said, "No, Warden, I'm working for myself, this is one of the ways I earn my spending money." He showed me that all of the bottles in the box were returnables and said that on a good weekend he will usually make anywhere from ten to twelve dollars along several of the highways in the Dauphin area. After talking to this boy I thought how nice it would be if all beverage containers were returnable and what it might do to our never ending litterbug situation.

John E. Stepanski
WWP (Doughin County)

"WILD" BAIT!

While checking ice fishermen at Wards Ranch Pond last winter Special Waterways Patrolman Raymond Gorman and I met Mr. Emery Blum (from Oil City) and his three sons. A total of eighteen fishermen were fishing through the ice and none seemed to have any luck.

Mr. Blum's son Steve, age 9, was jigging and wasn't having any luck either until he spotted an object on the ice. One-half hour later Steve had his limit of three nice brook trout!

The object was the tip of a filter cigarette butt! It sure was a big surprise to some of the nearby fishermen who were still having bad "luck."

Joseph Kopena
WWP (Forest County)

NIGHT "GUARDS"

On a dark, dreary misty night last February I arrived a bit early at the Pennsylvania National Guard Armory building in Kingston to conduct a "Safe Boating" class, only to find that all entrances, including the side entrance that I was instructed to use, locked up. There was a night bell

located at this door to be used to attract the attention of the custodian and as I was pushing his button (and also pounding on the door) in hopes of getting someone to unlock, my assistant SWP Joe Waiter drove up. Upon explaining to Joe just what the problem was he remarked to me that he noticed two "guards" at the front entrance as he drove by and suggested that probably they could let us into the building. I realized what Joe had seen and explained to him those same two fellows have been on that guard post since the Armory was built. They were made of bronze, one depicting the Civil War era and the other was a sailor of Spanish American War vintage. I can't help wonder what reply these two "guards" would have given had someone asked them about the "Safe Boating" course to be held that night!

Claude M. Neifert
Waterways Safety Coordinator



BROOK TROUT, BLUEGILL, PIKE, CHANNEL CAT, ROCK BASS, AND WALLEYE?

BAIT THIEF

Bill Thompson, a local bait dealer, had many of his baitfish disappearing from his bait tanks. He could find the remains of hundreds of these fish in various parts of the basement, but could not find out what was taking them. He tried setting traps but had no success. Finally one night, after hearing quite a commotion in the basement, Mr. Thompson discovered that the culprit had captured himself in a net that was laying on the bait tanks, and could not escape. Much to his surprise, Mr. Thompson found that he had apprehended one fish-eating stealing Opossum. Thus ended the mystery of the disappearing fish. Needless to say, Mr. Opossum is no longer in the bait stealing business.

Edward W. Manhart
WWP (Luzerne County)



I DON'T CARE HOW ADVANCED IT IS MISS CLUM . . . YOU ARE NOT TAKING THE KIDDIE-KIDDIE CLASS FISHING!

A PHONY

During a fishing school at Center Township High School, a group of cub scouts took a very active part in the program by asking questions and offering their own ideas. One little boy named, Tommy Glover, kept the entire class in stitches with a variety of amusing comments. The highlight of them all was during a showing of SWP Leroy Gosseck's slides of his 23 inch, 8½ lb., smallmouth bass. There on the screen was Leroy, smiling and displaying his mounted trophy. To this, young Tommy cried, "It's a fake! It's on a wooden plate!"

D. F. Parrish
WWP (Beaver County)

SALVAGE OPERATION?

While patrolling Cedar Creek in March, I noticed a young man along the stream throwing and retrieving what appeared to be a long rope. Since this stream was closed to fishing until the first day of trout season, I thought this gentleman might have found a novel way of sneaking out a couple of big ones and decided to watch him for a while.

I soon noticed that he had fashioned a lasso out of the rope, and after watching him cast this out and retrieve it for about ten minutes, I walked over to see what was happening. To my surprise, he was attempting to throw a loop over the leg of an old chair which was laying upside down in the middle of the creek. He stated that he was cleaning the creek of litter, including the old chair.

This gentleman was either vitally interested in ecology or desperately needed an addition to his living room set.

Fred Mussel
WWP (Lehigh County)

BIG SPENDER!

While working the Fish Commission display at the Scranton Water and Wheels show, the Deputies were having a little competition to see who would sell the most Angler subscriptions. SWP Racavich stopped a gentleman and asked him if he was a fisherman. The man nodded affirmatively. Officer Racavich asked if he received the Angler, to which the fellow replied, "No but I would subscribe, but there is one problem." Officer Racavich asked, "what would that be?" The gentleman said "All I have is this Hundred Dollar Bill!" The words were barely out of his mouth, when Officer Racavich was frisking the other deputies, (and me) and quickly came up with ninety-eight dollars change. Some guys will do anything to sell an Angler!

Robert E. Fasching
WWP (Lackawanna County)

BACK TO SCHOOL ANYONE?

Since the U. S. Coast Guard has spoken out to make the boating public aware of safe boating practices, it is surprising the number of experienced boaters that are finally realizing that the boating classes that are, and have been available, can teach them new and safer methods of enjoying this growing sport.

Frank Schilling
WWP (Philadelphia County)

SAFE BOATING

We had a class at the Allegheny Center Mall this year with over 250 persons in attendance, and last year the Class had about 85 persons in attendance. The extra efforts of everyone in the Fish Commission, USCGA, and the Power Squadron is showing results, as all the Boating Classes across the State were showing attendance increases.

Gerald T. Crayton
WWP (N. Allegheny County)

AS THE TWIG IS BENT

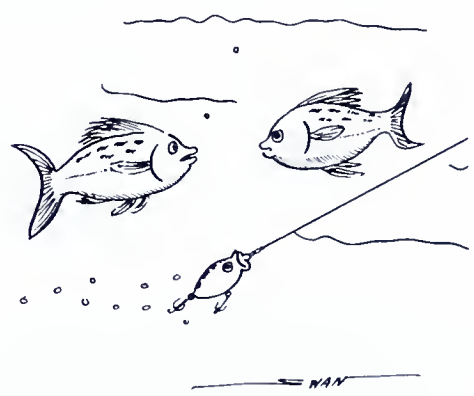
During the 1972 Trout Stocking Program, we were assisted by the Ridgway Area High School, St. Marys Area and Johnsonburg Area High School. The students involved directly in the stocking are learning various aspects of water quality and the fisheries business in general. They all have done an excellent job throughout Elk County.

Bernard D. Ambrose
WWP (Elk County)

TROUT MOVEMENT STUDY

On Saturday January 15, 1972, the Gettysburg Senior High School Science Club tagged and stocked 250 one-year-old and 250 two-year-old trout, (brown, brook and rainbow) in Carbaugh Run, Adams County. These trout were stocked from the Chambersburg Rod and Gun Club's, Falling Springs Cooperative Trout Nursery. The Science Club also studied the trout movement pattern and conducted a creel census during the first two weeks of the trout season. This project was under the leadership of Mrs. Victoria B. Weitzel, Biology Teacher. On the same day 500 year-old trout were being tagged at the Adams County Fish and Game Cooperative Nursery at Orrtanna, Pa. and stocked in Middle Creek, Adams County under the leadership of Miss Shirley Carlson and Mr. William Leslie, Biology teachers. Both groups were assisted by Fish Commission personnel. Many hours were donated by these teachers at their own expense for this project which is in its third year.

Bryce Carnell
WWP (Franklin County)



YOU TAKE IT—I'M TRYING TO QUIT!

TUNED IN

Mrs. Madalean Utt and her two young sons Kevin and Bentley had been attending the PFC Safe Boating Class in Carnegie, and each night sat in the very front row, copying every word said by the instructors on a tape recorder. Mrs. Utt stated that her husband was working "evening turn" at the Greater Pittsburgh Airport and could not attend the classes. After each class he listens to the recording and has his very own class in the living room!

James R. Smith
WWP (S. Allegheny County)



FIRE EXTINGUISHERS

for pleasure boats

by Joseph S. Dick
*Assistant Supervisor
Region II, Somerset*

In "Boating Bulletin," statistics were quoted that established fires and explosions as the third most occurring boat accident in the United States.

What do you know about fire extinguishers? To keep from becoming a statistic in the "fires on boats" columns, you should know whether your boat is required to carry a fire extinguisher; the type extinguisher required, and—*how to use it*.

Pennsylvania and Coast Guard regulations, which are identical, require that motor boats carry Coast Guard approved hand portable fire extinguishers, except outboard propelled boats including propeller driven airboats less than 26 feet in length, provided that the construction of these outboards will not permit the entrapment of explosive vapors. All extinguishers must be in good and serviceable condition. Boats under 26 feet in length need carry only one minimum approved type extinguisher. The above exemption on outboards, of course, does not apply

to boats carrying passengers for hire.

To determine if an outboard less than 26 feet in length is exempt from carrying a fire extinguisher, all five of the following conditions must be met: (1) No closed compartments under thwarts or seats wherein portable fuel tanks may be stored; (2) No closed storage compartments in which combustible or flammable materials are stowed; (3) No closed living spaces; (4) No double bottoms not sealed to the hull or which are not completely filled with flotation material; and (5) No permanently installed fuel tanks or no fuel tanks of 12 gallon size or over.

The following conditions do not, in themselves require that fire extinguishers be carried on outboards less than 26 feet in length: bait wells, glove compartments, open slatted flooring, ice chests.

Motorboats 26 feet in length and up must carry the minimum number of fire extinguishers regardless of how propelled or constructed. There is a standard

table to determine the number of extinguishers a class 2 or 3 boat must carry.

The Coast Guard approves four types of extinguishing agents for use on motorboats. They are: dry chemical, carbon dioxide (CO_2), foam and freon. Extinguishers approved for boats are marked: "United States Coast Guard approved"—"marine type." Marine type extinguishers are especially constructed for use on boats and are resistant to the effects of water and moisture. For this reason extinguishers for use in homes, garages, etc. are not acceptable on boats.

Most fire extinguishers found on pleasure craft are of the dry chemical or carbon dioxide type. Stored pressure dry chemical extinguishers manufactured after June 1, 1965 must have a visual pressure indicator such as a pressure gauge or similar device that shows the state of the internal pressure charge.

Dry chemical extinguishers manufactured prior to June 1, 1965 without the pressure indicating device are still acceptable if: (1) Inspection record shows weight check within past six months; (2) Weight is within one-fourth ounce of weight stamped on container; (3) External seals or disc in neck are intact; and (4) If there is no evidence of damage, use, or leaking. Such an extinguisher would be accepted if it was checked or serviced in April or May of each year and found in good and serviceable condition. When the type with the visual indicator shows the pressure to be low, it too must be serviced to bring the pressure up to the acceptable area.

Fire extinguishers required on boats are designed mainly for fires involving flammable liquids such as gas, oil, grease. It is important, therefore, that boat

operators become acquainted with the operation of extinguishers and how to use them properly.

Dry chemical— CO_2 and Freon are used to extinguish a fire by pointing the discharge at the base of the flame. Foam extinguishers must be inverted and the discharge "banked" off a wall or bulkhead or arched onto the surface of the fire. Foam extinguishers must be recharged once a year to be accepted.

Remember that once an extinguisher is used or partially used it should be recharged immediately. Don't try to save a few pennies by depending on a partially used extinguisher to be OK the next time it may be needed. Sometimes even a fully charged extinguisher isn't adequate to put out a fire.

Boat owners should make frequent checks to see that extinguishers are undamaged and in good serviceable condition. It would be a good idea to have them serviced or checked once a year by a service-repair man. An extinguisher should be mounted in a boat where it is readily accessible, but not near the area of the boat where a fire would most likely occur, such as near the gas tank or engine. It is probable that if a fire started in one of these areas, the extinguisher would be beyond reach.

It would be worth while for boat owners to give some thought to carrying extinguishers even though they may not be required on their boat. An extinguisher that is treated with care will last many years and the cost would only be a couple of dollars per year. It is said: "An ounce of prevention is worth a pound of cure." This could also be said about having the proper fire extinguisher readily accessible and knowing how to use it.



The well equipped pleasure boat carries aboard many items which are seldom, if ever, used. Your fire extinguisher should be checked periodically by a specialist—it's positively the cheapest insurance you can buy! (photo courtesy Evinrude Motors)

Journey on the Wild Side

by
Carsten Ahrens

illustrations by
Karin Ahrens DeStefano

There is so much more to a boat ride than the distances overcome; so much more to an angling experience than taking home a creel of finned, scaled beauties to provide the "piece de resistance" of a delicious meal.

The entire trip should be a memorable adventure as one leaves the turmoil of town to take on the peace of a lake or river in the wilderness, the delights of a day spent in the sun, the wind . . . even snow or rain. The happiness that comes with renewing friendships with wilderness creatures; lichens, mosses, ground pines, ferns, flowering plants, and trees, plus the additional pleasure of the flash of fur, feathers, and fins that add color and movement to the rooted and earthbound ones.

May I suggest that you make more of your trips than just another day of cruising, skiing, or angling? Get to know your wild neighbors along the way. They're not just trees; they're oaks and maples . . . yea, more than that! They're scarlet, shingle, swamp white, red oaks; they're sugar silver, mountain, red, Norway maples. At first it might seem a monumental task; there are scores and scores of species. But soon, with a little effort on your part, they will be old acquaintances, friends that will grow with you through the years, friends that you'll meet wherever you travel. A nature trail is a giant step that any club, troop, class, or team can make in getting to know the wild things.

Every community should have a nature trail. It can be a constant





Rhododendron (Rhododendron "maximus"), although Rhododendron means "rose tree," the shrub belongs to the Heath and not to the Rose Family.



Poison Ivy (Rhus "toxicodendron"), This poisonous, climbing member of the colorful Sumac Family can be identified by its leaves in threes and its whitish, bead-like fruit.



Dandelion (Taraxacum "officinale"), Taraxacum means "sour herb" and dandelion means "lion's tooth"; it refers to the notched leaves.

source of education and entertainment . . . even fun! As a biology teacher, nature counselor, and national park ranger-naturalist, I can't stress enough the uniqueness of such a path—where trees, shrubs, ferns, and wild flowers are tagged—as a way of getting folks acquainted with their woodland neighbors. Higher plants are earthbound; they can't come calling on you. If you want to know them, you'll have to seek them out. And once you really know them, no matter where you go, they'll seem like old friends when you meet them again.

THE TRAIL

If it is at all possible, make a *brand new* path for your nature trail. Don't decide that the old trail to the lake or the one to the bandstand in the park or the one to the baseball diamond can carry the responsibility. If the community doesn't own com-



Above: Pokeweed or Garget (Phytolacca "decandra"), This huge plant's young leaves are edible, but when the plant matures, the leaves, stem, and roots are poisonous. The dark berries were once used in the making of homemade ink.

mon property where a nature trail can be planned, permission to use a nearby, private site may be granted when the worthwhileness of the project is realized. So make a *new* trail. Devise it carefully so that it will lead to the highest and lowest places, the richest and poorest soils, and to the wettest and driest areas on the site. Plan it to cross or edge every different habitat available. Some plants are cranky; they will develop only in spots with very special conditions and no where else. A common mullein plant won't grow in a stream and a bulrush won't be found on a dry hill-top.

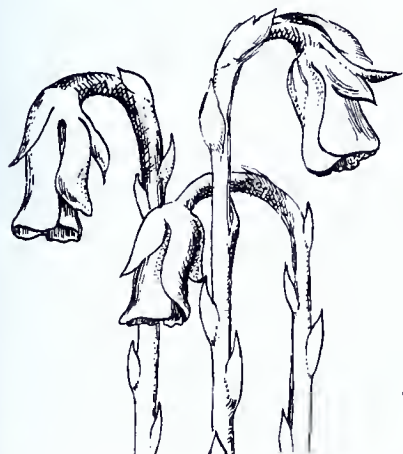
KEEP IT NATIVE

I have never helped with a trail that included all the plant neighbors. Constantly someone finds a fern or flower growing in the area but not along the trail. There is nothing unethical in transplanting the odd

Indian Pipe (Monotropa "uniflora"), This pale, leafless, and shade-loving plant cannot manufacture its own food, but survives on decaying wood. It belongs to a group of similar plants known as saprophytes.

Below: Box Elder (Acer "negundo"), This most rapid grower of the Maple Family is the only species of the Maples to have compound leaves.

Witch Hazel (Hamamelis "virginiana"), Spidery, yellow blossoms bloom in late fall; a trigger-like device shoots the seeds away from the parent plant.





Sugar Maple (*Acer "saccharum"*), The watery sap from this tree yields sugar. 5 lbs. can often be obtained from one tree. Lumber important in woodwork.



Yellow Poplar, Tulip Tree (*Liriodendron "tulipifera"*), The four-lobed leaves on this tree are unlike any other leaves in America. Poe used a giant tulip tree in the plot of his famous story: "The Gold Bug."



Red Bud (*Cercis "canadensis"*), This shrubby tree is a member of the Bean Family. Its coral flowers bloom early before the heart-shaped leaves appear.

one to a habitat similar to its own along the path. However, reserve your trail for native plants. Don't allow some would-be innovator to bring something from another region to "dress up the trail."

One spring after my biology class had built a nature trail in northern Ohio, a wealthy contractor surprised us by sneaking in and planting a dozen huge clumps of Texas blue bonnets. Now I'm very fond of blue bonnets, and they'd be fine along a Texas path, but they're out of place along an Ohio nature trail.

LABELS

Years ago, we laboriously cut our labels from the thin metal of vegetable cans, painted them white, and then in India ink, carefully printed information on one or both sides. These we nailed loosely or tied to trees or shrubs, or attached to stakes driven into the soil behind the non-woody plants. Now, much time is saved for one can get plastic labels inexpensively from biological supply houses. Then the information can be printed or even typed on the label.

PLANNING THE LABEL

This is research for developing botanists, so guides to flowers, shrubs, and trees should be available. There is an abundance of such books on the market that are well illustrated and easy to use. You should find a plant authority, if you don't happen to be one, who will be willing to check the labels. Your high school biology teacher might be the logical person to approach.

These tags should bear the common name or names of the plant and other brief bits of information that may aid one in knowing and remembering the various species along the nature trail. Scientific names? I never stress them, yet invariably they are added, for some plants like a tulip tree have several common names and many rarer species have never received a common name at all. Then it is a relief to have one name that is used for a definite plant species by scientists around the world.

Label the species several times along the trail. You will discover that a young tree is often quite unlike the

tree it will grow to be in twenty years, so mark the species often and soon everyone will know red and white oaks apart, and no one will call a tree of heaven a sumac!

The labels should be attached where they can be easily read by one seeking them; yet they should not dangle everywhere, giving a sloppy effect. I like a trail so marked that a careless person might travel its entire length and see no labels at all.

There will be other objects along the trail that could be designated by labels plus arrows: a groundhog den, ant hill, doodlebug traps, hornet nest, mantis egg case, cecropia cocoon, plant galls, fossils, a bee tree, opening to a flicker nest, year rings on a fallen tree. If the path edges a pond or swamp, a list could be posted of the mollusks, amphibians, reptiles, etc., that might be observed.

Remember, an out-of-door trip is never 100% fishing or cruising. There are always times when the fish are completely disinterested, the river in flood, the lake too rough, the sun too hot. But the wild things are always there, quiet and intriguing.



Worn Trailer Couplers *easily replaced*

On boat trailers which are left parked tongue down during the off season the couplers quite often suffer abuse and become battered and unsafe. Similarly, on trailers used extensively for many years the couplers become worn from normal on and off highway travel.

With a minimum of tools and effort you can replace your coupler in about 30 minutes. Select a model having a snap lever which locks the coupler to the ball. When properly secured, it cannot unlock by itself. A pin and chain are added insurance against accidental release.
(photo courtesy Dutton-Lainson Co.)

Keystone Camping

continued from page 23

use of the eight mile Erie Bay in case the "open lake" is frothing for successive days. When winds near the 20 knot mark or over, only the veteran old timer Erieites go out with uniquely heavy short-rodded walleye tackle to fight the "open lake" for yellows (walleye). But visiting fishermen make use of the two boat liveries either at the tip of Presque Isle in the lagoon area or closer to the western edge of the bay itself. Near each livery, park boat accesses are also available for largemouth and panfishing. But all this is another story.

"Open lake" fishermen head either for Shorewood east of the town of Harbor Creek where Moorheadville Road ends at the lake or at "Charlie's" where Pa. 89 (north) crosses North East and also ends at the lake. Both fishing points are supplied with the high-beamed 14 foot boats and 9½ horse motors which are cradled in a four-tired rig and "run" into the lake by a winch arrangement while

the fisherman is already set for his angling in the boat. Prices are ridiculously cheap for the boat rental on this 240 mile long lake. Moorheadville Road ends into the lake permitting private boat launching and a parking area is also available.

The wise angler goes out approximately two miles to dropoff ledge areas then uses a spinning or spin-casting rod with reasonable backbone and usually an 8 pound test line. A swivel is set about two to three feet above the 1/0 or No. 1 hook and a sliding sinker of about one to two ounces attached above the swivel. The line is dropped about 20 to 30 feet until the sinker hits bottom, then it is quickly wound about two to three feet off the bottom and the angler's technique is to "drift fish."

If you drift over a shoal that is a hotspot, you'll probably experience the wildest strikes you ever had in your fishing life. Both bass and sheephead know only one biting method and that can be summarized with one word, "WHAMMO!" Often a bass will surface, moments after the strike, to further shock the an-

gler.

Soft-shells are by far the preferred bait and when the action is frantic, which is not too unusual, three fishermen may have three fish on at the same time. We catch our softshells at Oil Creek or French Creek, south of the area. Minnows are also fair bait as well as crawlers with added spinner or bucktail jig combinations if necessary.

Sometimes when you camp at Erie you may have to play pinnocle for a couple of days because the lake is too rough and you can't get out. But the stay is well worth it, since almost any trip out has a good share of action. The entire summer on the "open lake" has this type of angling activity.

One caution—it's always a good idea to head for shore at the first sign of threatening weather on Lake Erie, particularly if lightning begins to flash in the sky or a few whitecaps come up on the lake. It is also sensible to take a radio along in the boat and monitor the local weather reports which come in almost constantly between bits of music.

Leaky Boots

continued from page 5

COME ON BACK!

As I imagine a lot of people that read the Angler, I've been meaning to write concerning some of the comments I have read in the Leaky Boots section of the magazine. I'm finally getting around to writing as I finish the check for three more years of this fine magazine.

I guess that while I lived in Pennsylvania, I was critical of portions of the fishing regulations, the stocking program, and fishing in general in the state. Since that time (because of job relocation), I've had a different kind of fishing. There are few if any regulations concerning size, limits, or seasons. Also there are quite a few fish. I could literally fill a boat with bluegills, or crappie in a lake not six miles from where I live.

But there are no trout streams (either stocked or with native trout), no Tionesta Creek, no Juniata River, or any of the other fine streams and rivers I fished in Pennsylvania. Here I have two polluted and silt laden rivers, and some smaller state dams near here; I'm presently living on the outskirts of Cincinnati, Ohio.

So to all of you that aren't happy with the fine fishing throughout Pennsylvania think of what I have! I'll trade you anytime you'd like. My greatest hope is that in the not too distant future, my Angler mailing address will be:

Steve Balog
Town-Anywhere
State-PENNSYLVANIA"

Thank you very much.

STEVE BALOG, Goshen, Ohio

You're welcome "home" anytime Steve!
Ed.

WELL DONE!

Enclosed find my check for another three years.

The Pennsylvania Angler and Boat-ing Magazine is as fine a magazine published as we are a fishing family.

The boating articles help keep you updated on rules and regulations which goes along with fishing.

I cut my teeth on a birch or hickory pole back in the depression days, a piece of mason twine, a bent safety pin fishing for pumpkin seed sunfish, chubs, and minnows in Latimore Creek.

We don't have the eels to fish for anymore like we had then, but we do have others to catch just as good eat-

ing. Thanks to you and the great job of the Commission. Keep up the good work.

My wife and I are having a very enjoyable time fishing and boating. If we are not going to eat the fish we catch, we put them back unharmed so someone else may have the same enjoyment we had catching them.

We can catch any species you can name, within a fifty mile radius (if they bite). A JOB VERY WELL DONE. Thanking you a million times over.

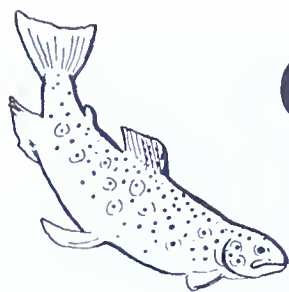
CLAIR E. HEWITT, Hanover, Pa.

It's folks like you Clair that make it all worth while—THANKS!
Ed.

WE TOLD YOU SO!

While in the Service I spent two years in Ohio and the fishing is absolutely non-productive. Size and bag limits should prevail in all areas of the state, and a good management program can provide this. I am proud to be a resident of Pennsylvania and have a wonderful organization like the Fish Commission on my side to keep my long fishing hours enjoyable. Keep up the great work.

BOB FIJAL, Mt. Carmel

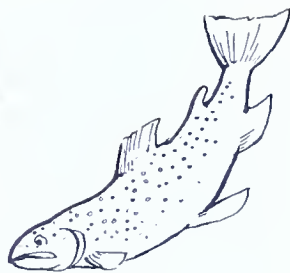


CASTING

WITH THE

CO-OPS

BY BILL PORTER



The Greencastle-Antrim Area High School's cooperative nursery in Franklin County is perhaps yet another first for the Cooperative Nursery Program. First in the sense that it is operated by a school system as an educational experience and not just a trout producer. The nursery is part of an extensive ecological center that includes a farm, wildlife center, a field laboratory, weather station, and other related conservation and natural interest areas. The complete complex is quite unique and is attracting a lot of attention from school districts over the state and conservation educators in general.

But the concern here is with the nursery project. Sponsored by the Greencastle Sportsmen's Association, the school's interest began in 1966 with the acquisition of about 60 acres of farm property bordering the school grounds. Included on the property was an excellent spring that had fallen on bad times. Silt and junk had choked it shut and considerable work was needed not only on the restoration of the spring but the entire site. It was about that time that the total project began to take shape under the direction of Fred C. Kaley, physical education and recreational director for the Greencastle-Antrim system.

Construction of the nursery was completed in June, 1970, when it was approved by Bob Brown, Chief, Cooperative Nursery Branch, for inclusion in the Fish Commission's listings. Prior to the Commission's participation, the Soil Conservation agency had been enlisted for technical advice and aid over the entire project, including the construction of the raceway.

As work progressed, some construction problems developed when the cement block were set without lowering the water. Eventually adjustments were made to reduce frost damage to the walls; screens were built and other improvements were made. To a degree, the building procedures were learning experiences in themselves for the students involved. Mistakes were made and corrected as

Fish Commission expertise became available to the students after application was made to join the Cooperative Nursery Program.

The value of a cement bottom to a raceway was shown as the natural stones and gravel had a tendency to wash away in the increased current from the spring due to the construction of the walls. The need for tying the block walls and pouring the cores



became evident as frost and storm damage caused some after-construction problems. Changes and improvements were made with others pending. Again, the educational experience was well worth the time taken, and the occasional trial-and-error methods did not detract from the interest or success of the project.

Other problems developed through no fault of lack of experience or technical advice—the water source had an extremely high nitrogen content and the trout were in trouble. Again, another academic challenge developed—there was another problem to be solved which, although bothersome, made the nursery more

of an interest to the students and the project leader. Other cooperative nursery clubs would just as soon not have the nitrogen issue; Fred Kaley and his boys probably felt the same, too. However, for *learning* purposes, it was one more phase of a natural issue to deal with directly rather than read about it in some manual or textbook.

And the problem was dealt with directly. A variety of aeration devices were tried. The most successful one was an electrically operated "minnow saver" style with a splash board rigged behind it at the head of the raceway. This unit was on a pole-switch that could be operated continuously or as long as needed during the day when fish were in the holding area. A second similar device without the splash board is available and has been used at varying times half way down the raceway. For all practical purposes, the nitrogen problem is being kept under control and the trout are progressing favorably.

Students run continuous tests on the water, trout growth, and other related factors to a balanced water environment. Feeding schedules are maintained by other students and varying diets have been checked and stabilized under the watchful eyes of Bob Brown and his staff to insure good growth and healthy fish at the end of the rearing season.

Chronologically then, the nursery was finally approved in June, 1970, and operated the first year with commercial fish. About 800 trout were raised on the first try; and according to the 1970-71 stocking reports, these fish were placed in Muddy Run and Diehls Run with the assistance of the Greencastle Sportsmen's Association and Bryce Carnell, Franklin County Waterways Patrolman.

Currently the nursery is raising its first crop of Fish Commission fingerlings. Stocking will be done during the 1972 trout season in area waters with some of the trout being retained in the pond below the raceway for show and holdover purposes.

The total project is a success and becoming more of one as each month passes. The cooperative nursery portion of the program is one of the most vital interest areas for the students and their advisors within the Greencastle-Antrim school's ecology complex.

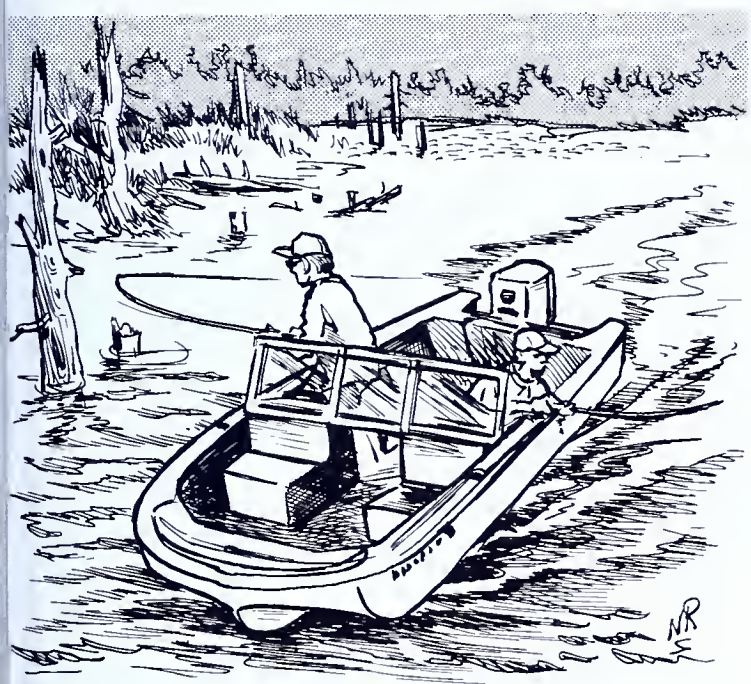
Oh, yes, the spring has a name—*Tayamentasachta*—meaning living waters—a very fine parallel to the concept of *Casting with the Co-ops*

We're Going Waterskiing

continued from page 9

there is any substitute for the competent observer which state law *requires* while towing a waterskier! In addition, we made it a boat rule that one of the members had to sit in the open hull and act as another pair of eyes for the driver. I felt that this was almost a necessity in order to be aware of floating objects and other boats and skiers. This is particularly true on a crowded lake; when the sun is reflecting from the water into your eyes; and when someone who is trying to slalom has dropped a ski. I found that a horn was also a quite handy and useful item to have.

In most of the books and pamphlets you read about waterskiing, you are encouraged to use a system of hand signals that has been recommended for communication between observer and skier. I would say that anyone who is just beginning to waterski should



treat the *learning* and *use* of this system of communication as mandatory! In addition, there are several signals that you may want to add of your own to suit your individual family and boating style. But knowing and using them is a *must*.

After only one season of waterskiing, we by no means consider ourselves professionals or "experts." However, some of the following things we learned you may find worthwhile:

1. We felt that a white colored water vest greatly increased the waterskier's visibility in the water. We wouldn't use any other kind.
2. As stated previously, the extra person, (helping the driver watch for persons and floating objects) is mandatory *when we ski*.

3. While some people try to tow a skier with the tow rope attached to only one side of the boat, it is my opinion that it is much easier and smoother to use a bridle harness that attaches to both ends of the boat and has a pulley on which the tow rope operates.
4. There is no substitute for learning the hand signals mentioned previously.
5. The competent observer should, in order to pass the competency criteria, be someone who can relay easily, messages to the waterskier, and messages between the driver and waterskier.

Thinking back, it seems a long time since I heard those words that were spoken every decent day (and on many that were down-right indecent,) by one of our three children. "We're going waterskiing today, aren't we?" From the time we purchased our boat until a thin layer of ice started to form on the lake, this was a question asked constantly! I have to admit that I was not always happy to be asked the question. This unhappiness was sometimes evidenced by the nature and tone of the responses that I gave. But the reader will have to understand that my children were captives of waterskiing. They would have been quite content to waterski most of their waking hours regardless of the weather. Oftentimes the only thing that would convince them to quit was utter physical exhaustion. Why, it was hard some days for me to get in any musky fishing! As far as the fishing was concerned, however, we worked out a "compromise." My son and I would fish early in the mornings and late evenings—the rest of the time was for waterskiing. I don't mean to imply either that the children shirked any of their responsibilities or chores in favor of waterskiing. Rather, they became super-efficient in doing many things which apparently were done inefficiently before. In fact, they became efficiency experts in everything they did. No motion was wasted in doing one thing at a time as long as two things could be done just as well! Also, an atmosphere of cooperation which we seldom experienced before now pervaded our household. Jobs that were reserved (or appointed) to one individual, were now done by all, regardless of whose job it was formerly. All of this was done, of course, in order that father would be more inclined to take them to the lake sooner. And father was generally inclined to take them to the lake sooner since he was quite anxious to go too.

When you live five minutes from a lake, there is little excuse not to use it. So we tried to use it as much as we could. I found it was great fun to help our children learn to waterski and in addition, we learned a great deal about boating, the water, and ourselves. It is a great way for a family to be together. "We're going waterskiing today, aren't we?" Well—maybe not today, but as soon as the weather is right . . . YOU BET WE ARE!

Hot Weather Bass

continued from page 13

perature to be 70° at eighteen-feet. Your tactics should be to troll at eighteen-feet deep and near areas that have produced good-sized fish in the past. Once you catch a fish, mark the location and work it over.

Other hot weather tactics involve simply changing your fishing style to match the changing habits of the fish. During warm weather most lakes are crowded with water skiers churning up the water, pleasure boaters, swimmers and other outdoor fans. Naturally the fish want no part of this commotion and they retreat to some nice secluded "hole" to wait for the racket to subside. The first approaches mentioned in this article dealt with finding those holes or other places that bass go during warm weather. But even then they may still be feeding little, what with

the noise and upheaval caused by boats and skiers.

In more cases than not, I've found that during July and August the best time to go fishing is when the other boats are heading for the dock at the end of the day. I'm not one for all night fishing, but by altering my time schedule a bit I'm able to still bring nice fish home while others remark, "they're not hitting." From eight PM to midnight and from four AM to eight AM are the time periods in which I concentrate my greatest fishing efforts. Fish will move into the shallows during these periods to gorge themselves on minnows, frogs and the like, and here is where an angler can have a real ball with surface baits. Work them slowly and erratically for the best results, but if this fails to produce, continue to remain flexible. Skittering them rapidly and loudly across the surface may be just the ticket, and you'll

never know until you give it a try.

You might also contact somebody in your neighborhood who has a reputation for catching big bass and ask his advice. Don't expect him to reveal the exact location of his hotspots he's worked so hard to find. But if he's any kind of sportsman, he's sure to tell you at what depth they're hitting, around what types of cover and structure to look for them, what lures he finds best and what hours have been the most productive for him. Armed with this information you should have little trouble in finding fish for yourself. If you do, pass the information to others.

There is no reason for you to stop catching big bass and lots of them, just because the hot weather has arrived. If you're willing to change your fishing habits as the fish have changed their living habits, the summer months can provide you with some of the best fishing ever!

WANTED: FISHERMEN WITH A STOMACH!

A FISH STOMACH, that is. Federal biologists of the U.S. Fish and Wildlife Service are currently studying the stomachs of fish caught by anglers in the Kinzua Dam in an effort to determine the preferred forage of the many species to be found there. They are asking fishermen to cooperate by leaving the stomachs of the fish they catch from this impoundment at any one of the many sporting goods stores displaying the "FISHERMEN—GIVE ME YOUR STOMACH" signs in the Warren—Bradford area. 4,000 fish stomachs will be needed to make the survey meaningful. If you fish Kinzua, you'll be doing a great service to the future of Kinzua's gamefish population by turning in your catch's stomach as soon after capture as possible.

Fishing Outlook

continued from page 3

Bassers use house boats, float boats or pontoon boats. Gasoline lanterns are hung from poles placed out over the water from the corners of these vessels. Supposedly these lights attract insects which in turn attract the Gizzard Shad fry and these in turn attract the White Bass. There is no set pattern as to what time this will take place. It might occur one hour after sunset, at midnight, four in the morning—or maybe not at all that night. When the fish start to feed though, the action is fast and

furios. The Gizzard Shad fry scatter everywhere in frenzied leaps, trying to evade the gaping jaws of the hungry White Bass.

Boaters get as near as possible to the channel that connects the north and south portions of the lake. This is about mid-way across the causeway. Depths here run up to twenty feet and this is the *fishingest* spot on the lake during July. White Bass although small in size are showy jumping fighters. They have tender mouths and must be handled gently or they will tear off. Ultra-light spinning outfits or the regulation sized spinning outfits with no more than four pound

test line are adequate and recommended. Fly rod fishermen using streamers can safely go down to two pound test tippets and not have any problem whatsoever.

If you get the chance to try some White Bass fishing on Lake Pymatuning this July, bear one thing in mind. There are no size or creel limits on this species in the lake. If you happen to be in luck and the White Bass are hitting, set a figure for the amount of fish that your family can utilize. Return the unneeded fish that you catch back into the lake for someone else's pleasure. Ten inches and up are the best eating size.

Man Who Had Everything

continued from page 22

the line back for another cast and in the process set the hook.

This unexpected and swift action momentarily surprised him and he soon had his hands full. He tried to keep the fish out of the swift current below him and for a few anxious seconds it looked like a Mexican standoff . . . neither of them budged. It seemed like a half hour to him, but only about five minutes had passed.

The fish tired and he slowly pulled it in. He submerged his net with his left hand and maneuvered the trout into it and then lifted it out of the water. As he did, it made one last effort and threw the fly. But it was too late. He looked at the fat fourteen inch brownie and for a brief moment was on the verge of releasing it as a reward for such a gallant fight. Then he realized that sooner or later it would fall victim to another fisherman since this was a high pressure stream and he'd probably never get another chance at it.

The warm wind began to intensify and the sky grew darker. It was now difficult to follow the float distinctly but he did manage to land another trout.

He worked back upstream toward camp, trying several other flies along the way. Then he switched to meal worms that soon produced another brownie. Shortly after, he hooked what he thought was a snag and grudgingly the object came in until he could

see it was a turtle. At that point, both of them knew who would win that contest.

When the leader broke he debated whether or not to continue fishing. The dark clouds now racing across the wind swept sky gave an ominous warning of the threatening storm and swift flying birds were now seeking shelter.

He broke down his rod, cleaned the fish as the thunder reverberated over the silhouetted mountains. Then he climbed the bank and crossed the main road. Grotesque shadows leaped about the tree covered slopes as angry fingers of lightning stabbed through the sky urging him to quicken his pace up the valley. A drop of rain fell on his glasses and an owl greeted the onrushing storm with a muted hoot from the surrounding hemlocks. By the time the deluge came down he was inside the one room camp and he hoped the rain would be short lived and not muddy the stream for tomorrow.

After stowing his gear he washed the trout, put the largest one in a clean plastic bag and placed it in the freezing compartment of the old refrigerator.

He turned on the antiquated oven, washed in cold spring water and then baked the two smaller trout. After he had eaten, he puffed liesurely on a cigar for a bit and then stretched out on a bunk. He closed his eyes and reflected on the satisfying time he had on the stream. Listening to the light patter of the rain on the roof he wondered why anyone would ask for anything more, because at the moment he had *everything*.

A BIRD'S NEST TO END ALL BIRD'S NESTS!

by Paul A. Lantz



This Baltimore Oriole's nest was found by Terry M. Oakes at his cabin at Weikert, Pa., along Penn's Creek, just below the fly stretch. The nest is unique because it is constructed almost entirely of monofilament fly line! It is 5 inches deep and 13 inches in circumference and based on the number of strands of monofilament line in one square inch of surface, it has been determined that the nest is built of 90 yards of line. Near the top can be seen a modified, home-made Light Hendrickson dry fly on a number 12 hook, still attached to tapered line. Down inside the nest is a bare number 8 hook on another length of line.

The nest is lined with silver-gray, long fibers from the cattail leaves which grow abundantly along Penn's Creek and some grass is also used to line the nest.

BOATING

Questions & Answers

by Capt. Jack Ross

From C. B. T., Meyersdale:

"To improve starting and performance of my inboard runabout, would it be possible to install a transistorized ignition system?"

—Transistor ignitions do not usually hold up well in small boats, because of the high humidity. There are a number of capacitor-discharge ignition kits on the market, however, which have been very successful in marine applications. These are simple to install, provide a much hotter spark for better starting and improved performance at high speed, and have the additional advantage of prolonging spark plug and point life. Be sure to follow the directions carefully when installing these kits, particularly if you have an electrical tachometer, since this instrument may be affected by the CD unit and some minor changes in the circuit may be required.



WHILE YOU WERE GONE, I THINK SOMETHING ELSE HAPPENED, HARRY!

From W. R., Dunlevy:

"The propeller on my outboard motor is pitted after only one season of use, and I have been told that this is caused by corrosion from the electrical system, or cavitation. Which is correct, and what can I do about it?"

—If galvanic corrosion is the problem, the pitting will be uniform over the prop surfaces, and will probably appear elsewhere on the lower unit besides. The remedy for this condition would be to make sure the ground

side of the battery is really grounded to the engine frame, so that no stray currents will be circulating through the water about the boat. If your problem is cavitation, the pitting will be confined to the forward side of the propeller blades, and will be most severe near the tips. A cure for this problem may be possible by switching to a prop with less pitch, but be careful this does not allow the engine to run over its rated rpm limit. Changing the trim adjustment of the engine often helps, and the boat should be loaded so that it runs as level as possible. Cavitation results when the hull speed is too low for the propeller speed, and it is frequently possible to correct the situation only by going to a larger engine.



From R. E., Williamsport:

"What size and type of cartop fishing boat would be suitable for a couple with two small children?"

—In my opinion, no cartop boat is really safe. Any hull large enough for two or more persons, and light enough to be lifted on top of a car, will tend to be very unstable because it is so light. Disregarding length and beam entirely, one of the principal factors in the stability of a small boat is its weight, because of the effect of inertia. A very light hull is oversensitive to changes in weight distribution, and will heel violently when one of the passengers shifts in his seat.



From G. B., McKeesport:

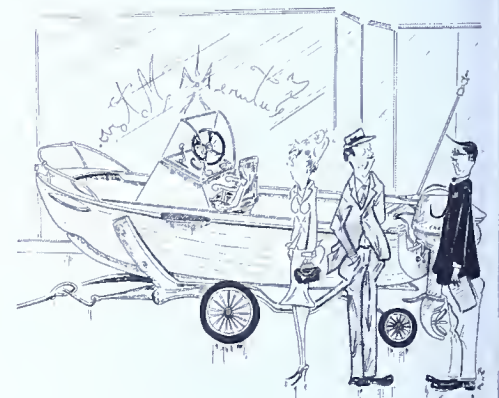
"Where can I get information on some of the large dams in this area where I could take my trailered boat?"

—The Public Affairs Office, U. S. Army Corps of Engineers, Federal Building, Pittsburgh 15222 will send you free brochures on their flood control dams in Western Pennsylvania and Eastern Ohio. These show the public access areas, launching ramps, marinas, and give general information on recreational facilities.

From J. M. N., Camp Hill:

"As owners of our first boat (a 16-foot outboard runabout) we would like to know what equipment, other than the required items, we should carry?"

—A basic list for a small boat would include an anchor and about 50 feet of $\frac{3}{8}$ " nylon line, a paddle, red warning flares of the type sold in auto supply stores for use as distress signals, a flashlight, and a hand pump or bucket for bailing. You will undoubtedly want to add many other items, but these are the bare essentials for safety. As new boat owners, you should also take one of the free courses offered by the Pennsylvania Fish Commission. A call to the PFC office nearest you will provide information on when the next class will begin in your area.



A LITTLE OLD LADY, YOU SAY?

From S. E., Downingtown:

"After reading a dozen catalogs listing boat plans and kits, I am thoroughly confused. What would be the best hull material for building a small boat at home?"

—There is one really superior material for the home builder which is economical, easy to work with ordinary hand tools, long-lasting, has a good appearance and great strength, and as an added bonus, it floats. It is called "wood."

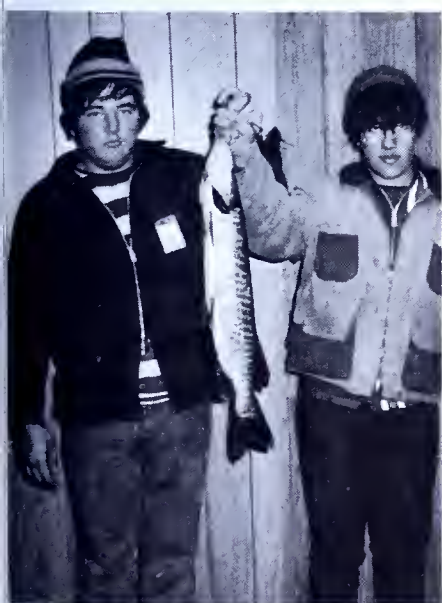
FISH TALES



WILLIAM PHILLIPS and sons, **BILLY & ERIC**, of Washington, Pa., hold 31 inch northern pike taken from Ryerson Station State Park in Green County last July. It hit a chub.



ROBERT HUFNAGLE, New Columbia, used spin-casting gear and a hellgrammite to lure this 20 $\frac{1}{4}$ inch, 3 $\frac{1}{4}$ pound catfish from the Susquehanna River in Northumberland Co. last August.



DONALD DELAMETER, JR. of Towanda (standing left) shares with a friend the joy of landing his 32 inch, 6 pound musky from the north branch of the Susquehanna River late last summer. It took a minnow.



Fishing is good therapy as evidenced by **JOHN (POP) GAMOLA** of Jessup who caught this large bullhead during "treatment" after several major heart attacks. He says he's just a beginner!



LAWRENCE CRAIG, JR. of McKeesport used spinning gear and a minnow to land his catfish—a 36 inch, 22 pound beauty from the Allegheny River in Armstrong County also in August.



Little **MELINDA WITMAN**, 4 $\frac{1}{2}$, of Reading shows the 14 $\frac{1}{2}$ inch bullhead she caught from Hopewell Lake with spin-casting tackle and a worm.



A Hanover resident, **EDWARD KLUNK** caught this nice northern pike from Long Arm Dam in Adams Co. last August. It measured 38 inches.



A Sunbury teenager, **JEFF DOEBLER**, holds the 20 $\frac{1}{2}$ inch catfish he caught from the Susquehanna with spinning gear and a worm.



A Uniontown angler, **GEORGE REDOVITCH**, displays the nice 23 $\frac{1}{2}$ inch, 6 pound largemouth bass taken from Yough Reservoir while **RAY LINDENMUTH** (right) of Sinking Spring shows his nice 12 inch bluegill caught from Maiden Creek while fly fishing with a homemade streamer.

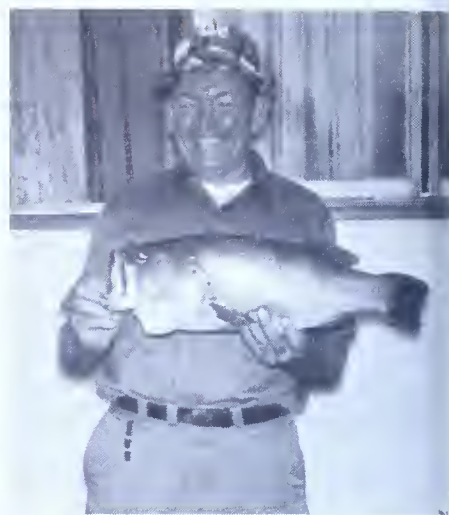


STEVEN SNYDER, 7, of Duncansville holds his big 22 $\frac{3}{4}$ inch catfish taken from the Juniata River while **RONNIE & PETER SCHULTZ, JR.** hold catches made by **PETER SCHULTZ, SR.** from the Susquehanna River—one 24 inch. All three chose nightcrawlers and were caught last summer.





VERNON MOYER of Harleysville holds his beautiful walleye caught from Lake Wallenpaupack while JOHNNY UMINSKI, 12, of Pittsburgh holds his 19½ inch smallmouth taken from the Allegheny and (far right) CHESTER TRUMP of Uniontown shows his 23 inch large-mouth bass taken from Yough Reservoir.



An Ebensburg youth, TERRY VARGO, happily holds the 29 inch walleye he caught at Prince Gallitzin State Park. He used a home made lure. CATHERINE TYSON, age 9 (right) of Philadelphia caught her chain pickerel using a live shiner last fall.



HAROLD DREESE (left) of Lewisburg displays the nice 2 inch smallmouth bass caught from Penns Creek in Snyder Co. while EDGAR ROWE of Hummels Wharf shows the 21¾ inch smallmouth he caught in the neighboring Susquehanna River in Northumberland Co.



NICK KOLAKOWSKI of Lower Burrell has his hands full with the 31¼ inch walleye he caught along with five others from the Allegheny River near Warren, Pa.



ROB URBANEK, 12, of Pittsburgh and his friends display the 35 inch, 13½ pound carp he caught with spinning gear and nightcrawlers from the Allegheny River last July.



BRYAN NEGREY, 12, of Johnstov holds the 26 inch, 8 pound walleye I caught with spinning gear and a wor from the Juniata River last summer



A Sunbury youth, RODNEY WERTZ holds the 27¼ inch carp he caught from the Susquehanna with spinning gear and a worm while MARK NYE, 10, of Hummelstown holds the 24 inch catfish he caught from the Susquehanna downriver from Rodney's catch.

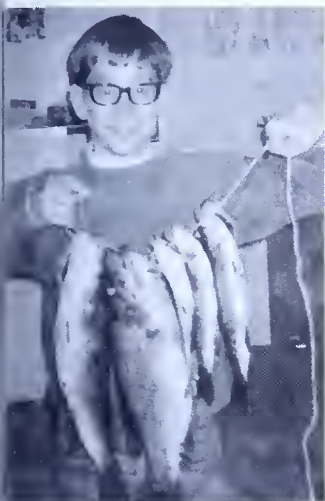


EDWARD BOZEK, JR., 12, of Rochester proudly holds his 17 inch bulhead taken from Shane Lake using spinning gear and a worm. MIKE MOYER (right), also 12, and of Wellsboro holds the 33½ inch, 2 pound, eel he caught from Pine Creek last August.





STEVEN SCHULER of Hanover (above) holds his beautiful 38¼ inch, 12 pound northern pike landed from Lake Marburg using a Mepps spinner with spinning gear, while ROBERT SAV-AGE (right) also holds a beauty—a 29 inch, 11 pound catfish taken from a Susquehanna Co. lake using spinning tackle and a minnow for bait.



A Sunbury youth, TODD PHILLIPS, holds the stringer of smallmouth bass he caught near Selinsgrove from the Susquehanna River. The largest was a 19 inch. JOHN HORN-YAK, 8, of Erie proudly holds the 22½ inch, 4¾ pound rainbow trout he landed from Lake Erie with spinning gear and a crocodile lure.



ARNOLD AARON of Strattanville displays the 37½ inch northern pike he took from Shenango Reservoir with a casting rod and a rapala as bait, while CHRISTOPHER POT-CHAK, 9, displays the 25¼ inch walleye he took from Belmont Lake. Chris lives in Warminster and used a little river runt for bait.



A pontoon boater, WILLIAM KNAPP-ENBERGER, of Hellam caught his 37 inch northern pike at Lake Marburg last July. It weighed 11 pounds.



LOUIS GOSSECK of Beaver Falls caught his 36 inch northern pike on a golden shiner from a pond in Beaver County. It weighed 12 pounds.



ANTHONY JURGILL, 11, of Allentown caught his big brook trout from Saucon Creek. It measured 20¼ inches and weighed 3¼ pounds.

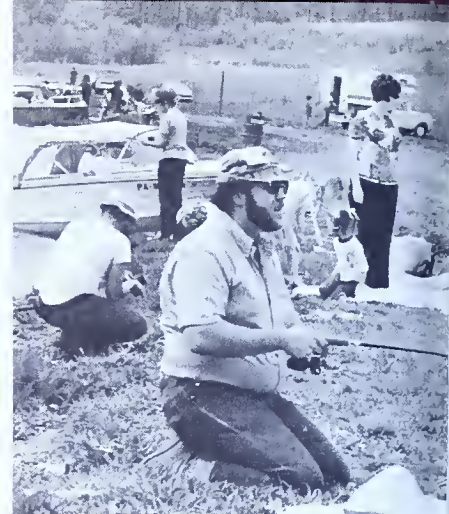


A Minisink Hills young lady, ROSE SILVERWATER, holds the nice chain pickerel she caught in the Delaware River near Shawnee last August, while little DAVID GINGRICH, 10, of Enola holds the 21¾ inch catfish he lured from the Conodoquinet Creek last August.



Two more youngsters, JOHN GRAZIANO, 7, of Dickson City, and CHARLES (CHIP) CZULADA, (right) of Pottsville proudly show their catches of largemouth bass. John's is a 23½ incher caught from Griffin Pond in Lackawanna Co. while Chip's is a 22 incher taken from Whitney Lake. Both catches were made last September.





"Stopping the action" or catching friends off guard calls for continual readiness on the part of the cameraman—no time for last minute adjustments. Pre-focus and "shoot" at the peak of the action! (photos by Thad Bukowski)

Fishing With A Camera

continued from page 7

The job is not done when films have been exposed and processed and the photographer has a collection of snapshots, color slides, or movies.

Snapshot albums should be composed with care, so that the pictures have a natural sequence and relationship. Fifty-foot reels of movie film can be spliced together to give them continuity in subject and color slides can be arranged in groupings.

An album in which snapshots are mounted can be made more meaningful if dates, places, and the names of subjects are written or typed on labels and mounted in the album with the pictures. Reels of movies and boxes of color slides should be numbered and labeled with notes of their contents, and an index of the reels and boxes prepared to make it easier to locate specific subjects.

Often a movie or a sequence of slides or snapshots can carry their own identification—a shot of a roadside sign carrying the name of a lake or stream; the sign at the entrance to a park; a sign at the dock or over the door of a fishing camp or lodge, for example.

Or with a close-up lens attached to a still camera or the zoom lens of a movie camera, titles can be photographed at home. Photo and art stores sell sets of adhesive letters that can be placed on an appropriate background—the cover of a book or a picture from a magazine, for example—and photographed under a floodlight to make attractive titles for movies and for color slide sequences.

It is recommended that color slides be kept in metal boxes, although they may also be kept securely in projector slide trays.

Movies spliced into 200-foot lengths are favored. It takes 12 to 15 minutes to run a 200-foot film through a projector, and this fact gives the operator closer control over the length of his showing, and if a sequence that is especially desired happens to be at the end of a 200-foot reel it can be reached with far less waste of time than if it were the last 50 feet of a reel twice that long.

I have purposely tried not to be technical, and I do not recommend any specific camera—those are matters the photographer can best work out with his camera and film dealer. The point is that *past* fishing and boating experiences can be *ever-present*—with the aid of a camera.

Some scenes you'll want to capture without action. The total absence of fishermen in this photo seems to make the lake all the more inviting for a return trip!



TAKING A CLOSER LOOK

by Tom Fegely

Instant Hot-Weather Bait

If necessity is indeed the mother of invention, then those who try "change of pace" baits when nothing seems interested in the traditional offerings know that they can make the difference between victory and defeat. Familiarize yourself with the specialized habitats of these on-the-spot baits and you'll have a ready supply of hackle for your bait bucket and hook.

TERRESTRIAL BAIT

Grasshoppers and crickets are probably the most popular of the readily available hot-weather baits. Some fishermen even prefer crickets to hellgrammites as the top smallmouth catcher. Trout and perch also relish both of these insects. Hook them carefully under the collar or through the body and pinch on a split shot for casting. Look for grasshoppers in tall grass and weeds and use your landing net to trap them. Crickets can be found in the same places as well as under loose stones and boards



The 17 year locust (cicada) had its peak year in 1971 but is available in wooded areas each summer.

A rotting log or stump may be a virtual "bait shop." Grubs, which are actually beetle larvae, grow from eggs laid in this organic material. Since they take two or three years to mature, rotting wood may contain a variety of sizes of these small, white worms. Keep them in a container of the same material in which they are found.

Other insect baits, including cater-

pillars, beetles and cicadas (sometimes called locusts) may be found along with the grubs or nearby on tree trunks and beneath loose bark. Last year the cicadas reached the peak of their 17 year life cycle and many anglers made good use of the many insects as trout and bass baits. Every year, however, some individuals hatch and broadcast their resting place with a loud, buzzing call.

Earthworms, both large and small, can be found sandwiched beneath flat rocks along with an occasional salamander. Although not a particularly popular bait, salamanders have been used successfully for bass. The red salamander and the spotted salamander grow to a length of six inches and are easily captured. Some sal-



The pickerel frog has squarish, dark spots on its back. It reaches a length of about 3½ inches.

amanders, such as the newt, live in water and are a natural food for fish that forage in shallow water. Hook these amphibians through the lips to keep them active.

SHORE BAIT

Moving closer to the water in search of "instant bait," keep your eyes (and ears) open for frogs. Green, pickerel and leopard frogs are best because of their small size. Hook them through the lips for bass, pike and pickerel.

Underwater in rocky streams and near shore along lakes and rivers you'll find the crayfish. During the day they hide beneath stones and other aquatic rubble. A small aquarium dip net is easy to carry and comes in handy when "crayfishing."

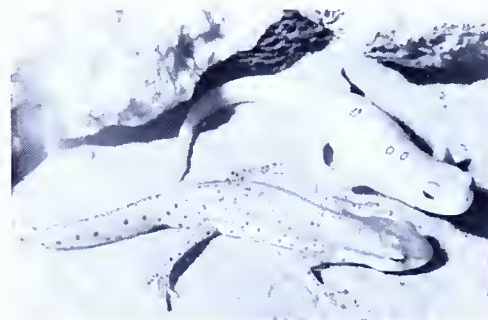
They swim backwards and are often deceptive in their movements. Keep them alive in a bucket with wet leaves and moss. Hook them through the tail or back for bass and walleye. Use the detached tail for catfish and panfish.

Snails and slugs have been used to take panfish and bullheads although their slimy coat makes them somewhat messy to handle and hook. Large snails may be found on stones and sticks in water and moist places on land. They must be removed from the shell before hooking. Slugs are shell-less land mollusks and even more slimy than snails.

Other underwater fare includes caddisworms and mayfly and stonefly nymphs for trout. Scoop them from bottom muck or scrape them from stones and rocks in rapid water. A number 12 or 14 hook tied to a tapered leader is needed to impale the tiny bait. Cast upstream and let the current drift the bait along its course.

Leeches, sometimes called blood-suckers, are close aquatic relatives of earthworms. They cling to rocks with their "suckers". Anglers have been known to rub liver or bloody meat on their waders and wade into a deep pool where the leeches are attracted and cling to the boots. They are tough and durable on the hook. Use them for perch, catfish and bass.

Your creel may already have some "instant bait" for you to use. Perch bellies can be used, with or without spinners, and are effective for bass, pickrel and pike. Catfish and eels are attracted to a gob of intestine fished on the river floor.



The newt (lower) spends part of its life in water where it is preyed upon by fish. Another phase of its life is spent on land as the "red eft." (upper)

Types of "instant baits" are limited only by an angler's ingenuity and the time spent hunting for them. Hook them so that they stay lively and fish them in a natural manner. As in baseball, a good "change of pace" often brings a strike.



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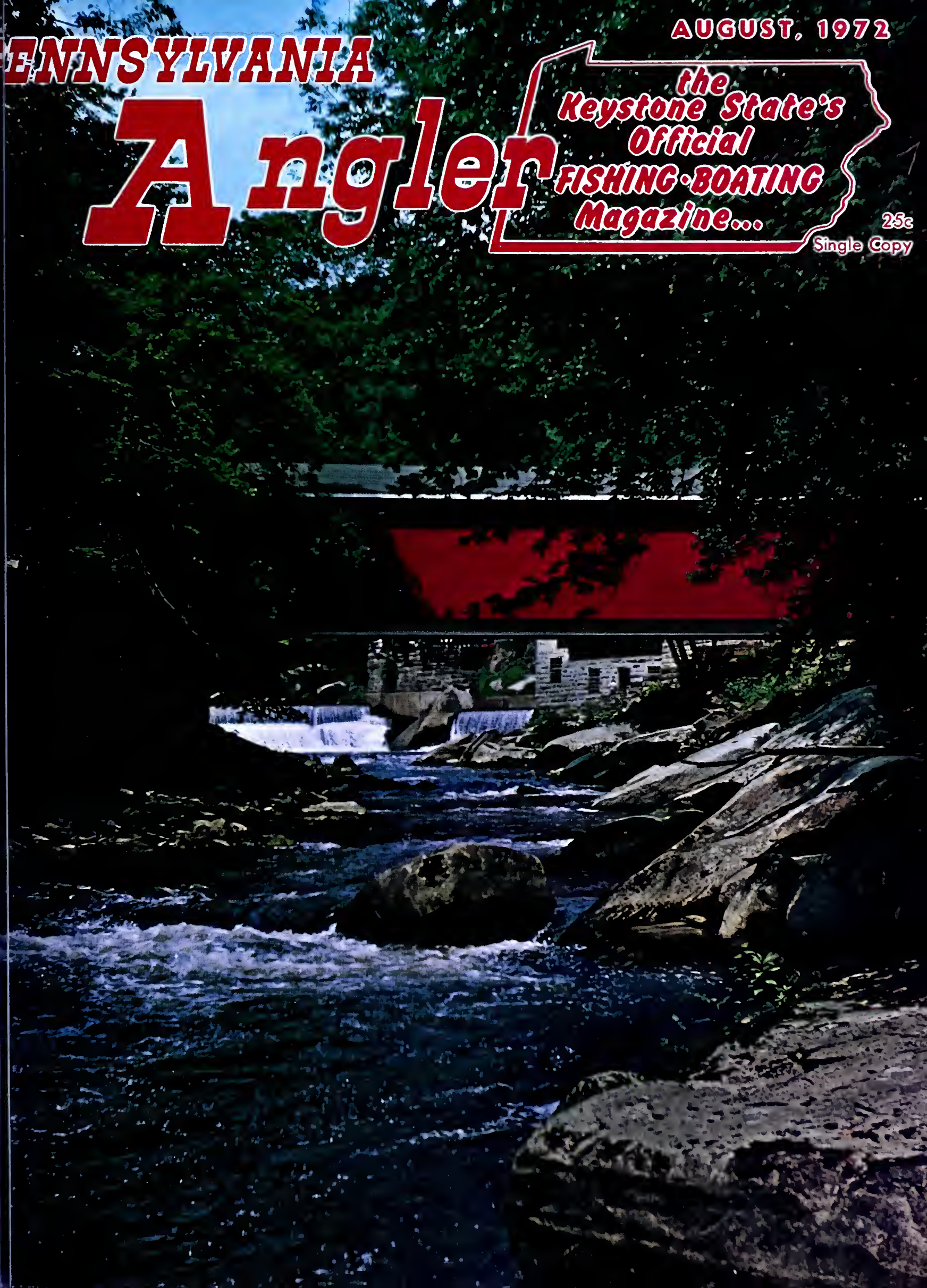
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**The Pennsylvania ANGLER is the only magazine devoted exclusively to
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AUGUST, 1972

PENNSYLVANIA

Angler

the
Keystone State's
Official
FISHING·BOATING
Magazine...

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Single Copy

“Pours and Pours, The River Roars”

So read the last few lines under June in the Old Farmers Almanac—quite a prediction!

If only we had known that the Almanac was predicting, very accurately, HURRICANE AGNES which caused the highest flood in the history of the Susquehanna and Schuylkill River Basins. Throughout the State over 45 people are known dead, more than 250,000 were left homeless, and damages have been estimated at close to 2 billion dollars.

At the time this is written, the estimate of damages to Fish Commission properties runs about \$150,000—which is relatively light considering that practically all of these properties are based on streamside locations.

The flood brought out the best in more people than we had ever seen before. Suffering personal losses to my own property I know what a great warming feeling it was to have good people, strangers, helping to clear out the litter and the mud, to offer their hearts and their homes to those who had suffered such misfortunes . . . at this point in life I can say that PEOPLE ARE GREAT!

However, this sort of catastrophe also brings out the worst in some people. Where some of our hatcheries overtopped, the brood stock of trout was, in several cases, washed downstream and it didn't take very long for “sportsmen” to go after them with hook and line. In one case we had to improvise homemade signs and close the stream immediately to fishing to save our brood stock for future generations of trout. Using electro-shocking devices, nets and everything they could get their hands on, our people salvaged good numbers of brood stock.

An adverse effect of the cleanup operations, and certainly one with the most far-reaching consequences, will be seen as local municipalities, feeling that they are in danger of immediate repeat performance of the hurricane floods, are shouting for stream clearances, channelizations, and everything possible to abate future damages. Inspection teams, local, state and federal engineers, accompanied in many cases by our Waterways Patrolmen, are making assessments of the problems as fast as they can, toward the end of instituting emergency procedure to stop further damage—should high waters come again. The simple guidelines are these: Unless a considerable amount of debris such as trees in or across the streams has occurred; unless there is a severe buildup of stream sediments in slit bars, landslides, etc., the stream is best left alone because one only passes the problem on downstream by channeling. In general, no channels should be widened beyond their original channel beds. In many cases the solution to future problems is an elevated flood plain.

We are trying to be as reasonable as possible about these stream clearances but at the same time we must protect, as much as we can, these great Pennsylvania water courses that provide the greatest fishing in the Eastern part of the United States.

Hurricane Agnes probably had a greater effect on more lives in Pennsylvania than any other event in the history of the Commonwealth—let's hope that many people will retain that wonderful attitude of unselfish helpfulness that they demonstrated during the crisis, and that reason will prevail in the demands for protection from future floods.



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STATEWIDE with the EDITOR

ON THE COVER—the frequently photographed covered bridge at Slippery Rock Creek Gorge in McConnells Mill State Park (Lawrence County) was recorded for the ANGLER by Jim Hayes. The area is stocked with trout and boasts of some excellent small-mouth bass fishing we're told. The presence of a covered bridge seems to add that extra something to a fishing trip. PENNSYLVANIA ANGLERS will want to read Wilbert Nathan Savage's "Vanishing Bridges of Yesterday" beginning on page 12.

Two letters received today touch upon a gripe common among fishermen and excerpts from each follow.

✕ ✕ ✕

"I started trout fishing with my husband this year and I would like to know why you don't let the fish in the creeks a few days before permitting fishing. When I saw the way the creeks are stocked and watched the fishermen go right after them—well to me, it was about the most stupid thing I had ever seen! . . . you should just let them fish out of the truck!"

"I know I'm just a woman and maybe my way of thinking about stocking is wrong, but I feel something should be done about it."

Thank you,
Florence Blackstock
Glenshaw, Pa.

✕ ✕ ✕

"I would like to see trout streams closed for at least two days after stocking to give the confused fish a chance to spread out before the fish hogs have them all caught."

"They follow the truck like bees after honey and if it were possible, these so-called sportsmen would drop their lines in the truck tank!"

Respectfully
Barry Clapsaddle
Arendtsville, Pa.

✕ ✕ ✕

Before we attempt to resolve these "problems", let's take a quick look at what stocking trout is all about.

By April 15, 1972, 37 fish trucks, operating within the Cooperative State-Federal program had been dis-

patched six days each week from 7 Fish Commission (and 1 Federal) hatcheries until they made 728 trips and covered 148,000 miles to stock 2,430,000 trout for one single purpose—to be caught by PENNSYLVANIA ANGLERS. Immediately after the opener, another million were on their way for the same purpose.

Now then, while the Pennsylvania Fish Commission establishes "seasons, minimum sizes and creel limits," we can in no way dictate *angler behavioral criteria*. This in no way infers that we condone some of the unsportsmanlike antics witnessed along our waterways STATEWIDE.

"Something should be done about it . . ." We have, we are—and will continue to do so. Let's go back about twenty years. Back in the early 50's, by the authority granted under section 254 of the Fish Laws, trout streams were closed for a period of five days after trout were stocked. This section of law stipulates that such sections be posted with notices stating the day when they will again be open to fishing. Result? Every five days, somewhere, it was April 15th—all over again. Landowners suffered terribly, those same "truck-followers" were there and eventually this optional provision of the Fish Law was set aside in favor of "SECRET STOCKING". The Waterways Patrolman met the fish truck at a time and place (unannounced to the general public) with a handful of volunteer sportsmen, "sworn to secrecy", so to speak, and stocked Stream "X". At the end of each week the Patrolman announced the week's stockings through the local news media. This system should have worked—but it didn't!

The fish trucks were easily spotted and a few lucky anglers enjoyed a virtual PARADISE for a while—until the word spread. It is alleged that here and there a streamside resident was "commissioned" as an observer and a simple phone call (to a few) that "the truck just went by" brought a monetary reward. There was no such thing as a "secret" stocking!

Unfortunately many of Pennsylvania's trout waters do not have roadside access at more than a few locations and an even distribution of fish is not an easy task. Float stocking, either from float boxes pulled along by volunteers in waders, or by boat on the larger, deeper streams is rapidly gaining popularity. (See WWP STEPANSKI's ACCOUNT OF DAUPHIN COUNTY'S FLOAT STOCKING—Page 6). It is certainly a step in the right direction but all streams cannot be stocked in this manner. Even an ATV couldn't "float" stock the rocky gorge of the Conewago in Adams County! Then too, the success of float stocking is dependent completely upon the wholehearted cooperation of local sportsmen. It takes *committed volunteers* who turn out at each stocking intending to work! It's being widely accepted STATEWIDE as a cure-all for Barry Clapsaddle's "fish hogs."

Another method of restoring sport to trout fishing is the establishing of "WIRED AREAS" at a number of locations along the length of a stream. Briefly, these are sections clearly defined by a wire boundary and posted accordingly with signs. During the in-season period all trout stocking in a section of stream having wired areas is *confined to wired areas only* and fishing therein is prohibited. PENALTY \$100.00! The purpose of wired areas is to provide temporary holding sections for plantings of hatchery trout. As the stocked trout become acclimated to their new waters, they move out and become available to anglers over a sustained period of time.

"Why don't we have them in OUR county?" Requests for wired areas must originate with local sportsmen's groups and must represent the wishes of the majority of local anglers—that's why! Give it some thought . . . bring it up at your club meetings. Invite your District Waterways Patrolman and he'll give you full details about both float stocking and wired areas. It may be the answer if these "problems" exist in your area. As a matter of fact, there isn't anyone more qualified to answer your questions or unravel your fishing or boating problems than your Waterways Patrolman! His name, address and phone number are listed in the back of your Summary of Fishing Regulations and Laws and your pamphlet of Pleasure Boating Requirements.

Bill Stitt
814 Sheridan St.
Altoona, Pa. 16602
Dear Stan;

I am writing to ask you if you could possibly get together some information on the Fish Commission's plans on stocking the new Raystown Dam in Huntingdon County?

What are the Commission's plans regarding fishing and boating regulations? What will they do about fish already in the old dam area?

Many of us local anglers would like to see the Commission stock the river above the dam and then close it to fishing for a year or two, or until the dam is finished. Hope you can give us some information.

Thanks for your interest,
BILL STITT

Dear Bill;

Several days were spent in the Huntingdon area with Waterways Patrolman Jim Valentine and Bob Hesser, Commission Biologist and hopefully we can answer your questions.

Back in 1968 the first steps were taken in the creation of the new impoundment on the Raystown branch of the Juniata River. The old Penn Elec Dam, just above Hawns Bridge, impounded 800 surface acres of water.

Warm water species made up the fish population in the old dam. Large-

mouth bass and crappie fishing here were outstanding and walleye, muskellunge, and smallmouth bass fishing was pretty good too. Channel catfish, bullheads, and an occasional chain pickerel were also found in the lake. Water quality for the river and for the dam is rated very high and this accounted for the fine growth of the fishes in the lake.

Construction of the new dam breast is well under way and is scheduled for completion around September of 1972. Located downstream approximately 6 miles from the old dam breast, it is a giant structure. 1700 feet wide, it rises 225 feet above the stream bed. It is of rock and earthfill construction and tapers from 1550 feet at the bottom to 24 feet wide at the top. Water depth at the breast will be 167 feet and the recreation pool will be 27 miles long and have 8300 acres of surface water.

Present plans call for the dam to be filled to the recreation level by July of 1973. Fish already in the pool will not be disturbed in any way. The Commission plans to assist Mother Nature in her restocking program by adding great numbers of game fish fry and a limited amount of fingerlings of the same. Also on the agenda is an experimental stocking of striped bass. Inland water fishing regulations will prevail.

There are 8 access areas proposed

for the new Raystown and also three camping areas. To insure maximum utilization of all of the waters, the dam will be zoned. There will be high speed zones and lanes, sailboating areas and "no wake" zones where fishermen will have optimum conditions in the better fishing spots. As in everything else that is new, these regulations are being set up on a trial basis and if the need arises they will be changed as needed.

Water from the dam will be discharged from three different levels. This will maintain water temperatures so that they are the same leaving the lake as they were coming into it. The turbulence at the discharge should highly oxygenate the waters and provide a tremendous fishery in this tail race area. Look for rock bass and walleye fishing to be "out-of-this-world" during the months of May and June of each year. The fish already in the impounded area are going to have more than ten times the amount of water to live in when the dam is complete. If the past can be used for a guideline, these fish will literally explode in size to help fill the void.

A new wrinkle is being added in the construction of the new Raystown Dam. The standing trees, bushes and shrubs in the deeper areas will not be cleaned off. They will clean everything off in the shallower spots and

continued on page 22



FISHING OUTLOOK

By-- Stan Paulakovich

It's business as usual for local anglers as Raystown construction progresses.



Another rockbass is added to this angler's stringer—they provide fine spring sport.



Spillway nears completion. Final recreation pool will be 27 miles long and cover 8300 acres.





TILICUM—"FRIEND"?

Dear Miss Evernden, c/o Pennsylvania Angler

I am interrupting my dinner to fire off this note about your article in the January 1972 Angler entitled "What Shall We Name Our Camp". Congratulations on an article which achieves excellence with brevity, a much tougher task than when 10 or more pages are involved.

I would like to add a note to your explanation of the name "Tilicum". A while ago I read a book entitled "Wild Geese Honking" by an author of moderate fame whose name escapes me. The book deals with the wanderings of a man driven by his wandering soul to roam until he settles in Alaska. I seem to recall that the man and his wife had a boat named "Tilicum" which was Alaskan Indian (or perhaps Canadian Indian) for "friend". Unfortunately I cannot verify this by either reference to the book (it is 2000 miles west of me now) nor by an actual trip to Alaska. Don't I wish I could change this.

JOSEPH A. VOROZILCHAK,
Philadelphia

HANG IN THERE ALAN!

My subscription to your very fine magazine for the umteenth time.

Am over 70 but still enjoy your articles on fishing and also your fine articles on fly tying. Also still enjoy fishing when I get a chance to go.

ALLAN HUTCHINSON,
Franklin, Pa.

WATCH OUT, DAVEY JONES

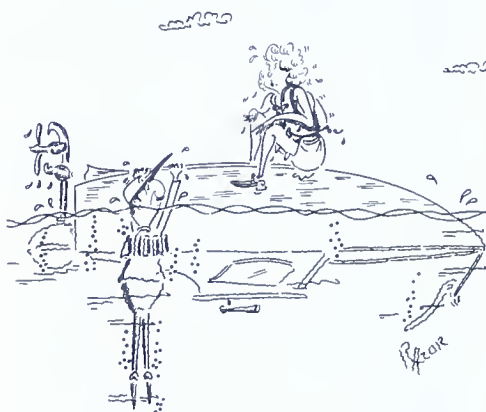
In the past year I have noticed with interest, the debate about boating articles in a fishing magazine. My comment—my most expensive piece of fishing tackle is my boat-motor-trailer combination. These two pastimes *definitely* do go hand in hand.

As for safety afloat; it cannot be over-emphasized. Last October, on the Allegheny Reservoir, my wife and I

came upon two men who had been dunked in the lake. Their 12' fiberglass fishing boat ruptured, filling itself with water, then capsized spilling themselves and a weeks supply of gear including a tent and guns. They were able to reach shore, an accomplishment considering the fact that one was wearing waders. Much of the gear was lost.

I believe this boat was grossly overloaded. I have seen other small boats going to and from campgrounds that rode very low in the water. A 12' or 14' cartopper simply cannot handle two or three people, a tent, a weeks supply of chow, and who knows what else!

ERNEST L. HAGBERG, RUSSELL



"I TOLD YOU SO!"

CO-OP FAN

I am writing to tell you how much I enjoy reading the Angler. I especially like reading the monthly feature about cooperative nursery projects by Mr. Bill Porter. I am a member of a fishing club. I enjoy these articles very much and like learning of the different clubs that have taken a part in this program.

BRUCE BILLINGS, Lake City, Pa.

Glad you are enjoying the Angler and especially Bill Porter's Cooperative Nursery series column. This is one of my favorites since it deals with one of the most worthwhile projects in which Sportsmen's Clubs can become involved.

Ed.

HE THINKS IT'S FUN!

I read "Our Magazine" in the December issue of the Angler and I have an idea of something I would like to see in "Your Magazine." I think it would be fun to make this a project. Let's make a big scrapbook on fishing, techniques, and the whole works. Publish a page or two a

month, and continue it month after month. Call it the Angler Encyclopedia on Fishing. Good luck.

DAN WEGRZYNEK,
North Versailles

Ever since I can remember Dan, when a conversation begins with, "I've got an idea. Let's . . .," it means a new project for me! I'll have to hand it to you though, you've taken care of the most difficult part—you've chosen the title. You're all heart!

Ed.

NOT QUITE!

I caught a carp on Sunday, November 28, 1971 in the large lake at French Creek State Park, Berks County, that weighed 20 pounds-2 ounces and was 34½ inches long. It was caught on a minnow attached to a number 8 eagle claw gold hook with a split shot painted yellow on the head of the hook. I was using a South Bend ultra light rod, a quick ultra light reel and 4 pound test line while anchored and fishing from my boat for yellow perch. It took me one hour to play and land. In order to land it I had to finally row to shore and beach the fish. My landing net was too small. The hook was in the carp's lip and the minnow was still joined to the hook. Could this be any kind of record for the type tackle, hook, line, etc.? At any rate, does this qualify as a citation fish?

By the way, I've been a subscriber to the Angler for many many years and look forward to each issue. While I enjoy all of the articles, I particularly appreciate the fly tying instructions and examples. They are very helpful.

I am also a boat owner and equally appreciate the articles on boating.

J. A. CLYMER, JR., Wayne

Sorry J.A.—carp must measure 36 inches to qualify for an ANGLER CITATION! Suggest you check for the record on 4 lb. test line in the record book.

Ed.

CARPSUCKERS—

I am 68 years old and do a lot of fishing in the Susquehanna River from above Wrightsville bridge all the way down to tide water and last fall was the first time that I had seen two carsuckers caught. I did not know there was such a fish . . . and I thought I knew them all! Never too old to learn!

HENRY W. LITTLE, York

And there are more where they came from Henry!

Ed.

GOOD IDEA!

In the past two years of reading the Pennsylvania Angler it has come to my attention that you have omitted any article concerning the Northern Pike and the Russian Muskies.

I suggest that you have an in depth biological study of these two species of fish, and present them in the on-coming issues of your magazine.

SESLEY WASIK, Harwick
We'll put our Management Section on it! Just wait and see. Ed.

BLUE PIKE

I just finished reading an article about Lake Erie Blue Pike. The article stated that the Pennsylvania Fish Commission has taken on the "Survival Challenge" of the Blue Pike. It is heartening to know something is being done to try and save these fish.

In my 37 years, my best fishing experiences have been fishing for blues on Lake Erie. Those were the days. I yearn to live them again, and also for my children to live that experience. I would like to know if there is anything that I as an individual can do to help with the efforts to save the blue pike.

DALE P. KELLY,
Cheektowaga, New York

The blue pike suffered a population collapse subsequent to poor hatches in 1954 through 1958. The reason for these poor hatches is unknown but low brood fish abundance, cannibalism and predation by yellow perch and smelt, low oxygen over traditional ranges off Ashtabula and Conneaut, Ohio, siltation, pollution and intensive, unregulated sport and commercial fisheries are suspected causes.

Following their collapse after 1958, their numbers diminished greatly to a point where it is thought the blue pike were forced to spawn in a mixed population of walleye and blue pike. Specimens that the Fish Commission has collected alive are thought to be hybrids; the result of the mixed spawning.

Therefore, since the population collapse, particularly since the mid 1960's, no positive true blue pike have been observed by the Fish Commission. We have several hybrids, or intergrades, alive and are attempting breeding experiments.

The Pennsylvania Fish Commission has volunteered to participate with the U.S. Department of Interior, Bureau of Sport Fisheries and Wildlife in a project which will attempt to locate, culture and propagate the blue pike. The donators of "suspected" blue pike are paid a fee of \$25.00 for their efforts and expenses. This

fee is paid upon our verification of the species, by the Bureau of Sport Fisheries and Wildlife. The blue pike is one of four species classified as endangered species of the Great Lakes, the others are deep-water cisco, longjaw cisco and black-fin cisco.

Although we believe the blue pike to be close to extinction, the Fish Commission will continue to search for pairs of true blue pike brood fish. There is still some hope that the restoration of this sub-species is possible.

We certainly thank you for your interest in the plight of the blue pike and the Pennsylvania Fish Commission.

SHYRL HOOD, Chief
Warm Water Production

PARTY POOPER

I am wondering if someone from the Fish Commission could explain why someone would deliberately throw corn into Pithole Creek, Venango Co., on the eve of the opening of trout season last year? The person or persons fed these trout at the locations the Commission stocked the fine stream. Sorry to sadden the culprit, but we had a great day's fishing, thanks to the first rate job of stocking trout in this stream by the local Waterways Patrolman, C. W. Shearer.

I'm sure the individual(s) will not read this letter because he sure isn't a sportsman and couldn't possibly receive the "Angler" by doing this thoughtless act.

ED NICKLAS, Pittsburgh

To date we've had much more success "explaining" the movements of fish—than people. At any rate, it didn't work—did it? Ed.

YOU NAME IT—

I particularly enjoyed the recent article in the Angler dealing with the problem of finding a name for a camp or cabin. My family has wrestled with this problem over the years and we still just call it "the cabin."

There's a group of cabins here in central Pennsylvania which have names like "Dun Rovin'," "Hate-to-Leave-It," "Welcome Inn," and the like painted on signs along the road.

One real "individual" has a sign which reads "Keep Out—This Means You!"

NED MINSHALL, State College

He's got cabins in every county Ned—I've seen that sign STATEWIDE! Ed.

CAN'T BUFFALO HER!

In regard to the identification of Mrs. Glenn Sweet's fish, (Feb. '72) it sounds to me that she caught a smallmouth buffalo. Last summer, while fishing on the Shenango River, a boy caught a fish that looked like half carp—half sucker. It was about five pounds and was almost 24 inches in length. The bigmouth buffalo has a mouth turned upward, unlike the smallmouth.

As for your magazine, I cannot say anything good enough to do it justice. I have a subscription to it and regard it as the best bargain I ever made.

LINDA ROMANENKO, Greenville

Could be Linda—it's difficult to positively identify a fish without seeing it. Ed.

RIGHT OR WRONG?

Your article "Riparian Title in Pennsylvania" by Mr. Lynch, Jr. was quite interesting. I wonder if you could have an article in Leaky Boots stating a fisherman's rights along our Pennsylvania streams. There are a lot of fishermen who don't know.

My understanding of this subject is as follows: We are allowed along a stream in Pennsylvania from the edge of the water to the high water mark, which is the beginning of floodstage, on all navigable streams and including the Youghioghenny and Susquehanna Rivers. Am I right or wrong? If so please clarify in a future Leaky Boots article.

JOHN W. GREENEWALD,
Finleyville

My understanding is somewhat different John and although I can't give you legal counsel, I can offer you a simple 3 step plan guaranteed to work everytime.

Step #1: Select a section of the particular waterway you'd like to fish and determine the ownership thereof;

Step #2: Contact the owner and ask his permission to fish;

Step #3: (Seldom needed) If you are refused—don't waste valuable fishing time arguing—leave!

In over 30 years of fishing I've never been "chased off" anywhere! Ed.

THANK YOU

Just a quick note from us, Boy Scout Troop 213, to say *thanks* publicly to Robert Fasching for putting on a "Fishing School." We all feel that the Fish Commission and the Angler are doing a fine job—Bob's presentation was equally well done.

BOY SCOUT TROOP #213, Dalton

DAUPHIN COUNTY

a conservation-minded county!

by Jack Stepanski
Waterways Patrolman
Dauphin County

Mention Dauphin County and the first thought that comes to mind is Harrisburg, the State Capitol and a metropolitan county consisting of little more than Harrisburg and the surrounding residential area. The truth of the matter is that there is excellent fishing to be enjoyed in the county, both for trout and warmwater gamefish!

The Pennsylvania Fish Commission's stocking programs and pollution abatement efforts are in no small way responsible for some of this fine fishing. The Susquehanna River in this area alone has become one of the best smallmouth bass fishing waters in the Eastern United States. The county has *nine trout streams* which flow through terrain varying from farmland and mountain valleys to remote fast moving mountain streams—all of which provide excellent trout fishing. Perhaps one of Dauphin County's greatest assets is the great interest in environmental conservation displayed by the organized sportsmen throughout the county.

In December of 1968, a new sportsmen's club, selecting the name of "The Dauphin County Anglers and Conservationists Club" was formed in the Millersburg area. The club based its formation on promoting better fishing and conservation practices throughout the entire county and intended to accomplish these goals through stream improvement, float stocking of trout and the con-

struction of a cooperative trout nursery to raise fingerling trout. One month later, in January of 1969, a second new club was formed in the town of Lykens. This club chose the name, "The Upper Dauphin County Conservation Club," and was formed for the purpose of providing better fishing in the three creeks of the Rattling Creek watershed and the promotion of better conservation practices in general in northern Dauphin County. They too planned to achieve these goals with stream improvement work, float stocking and the construction of a cooperative trout nursery on Rattling Creek near Lykens.

After but another month, these two newly formed clubs joined with the long established Erdman's Sportsmen's Association and in February, 1969, formed the Dauphin County Federation of Sportsmen's Clubs to undertake the never ending chore of improving the environment by initiating good sound conservation projects throughout the county. The initiative of these clubs was the beginning of what was to be a most successful conservation program. Today, after just four years, their efforts stand as a monument to what each of us can do in our own "backyard"!

The first project undertaken was to "float-stock" all trout and do away with the "bucket" method of stocking. In March 1969, the first year of

the float stocking program, opposition was quite heavy but the clubs stuck to their aim and float stocking became a reality and eventually was highly accepted. Today I believe Dauphin County can be considered as a model county in this category. The program is coordinated through the Federation Fish Committee Chairman, Clarence Hoffman. Through the efforts of the member clubs, the county has some 30 float boxes that are used in the program. Dauphin County has 64.5 miles of approved trout water and since the spring of 1969, *every mile of approved water has been "float-stocked"* . . . thus scattering these trout throughout the *entire length* of each stream in the county. This method has proved to provide better fishing as each year passes; good fishing is realized and enjoyed throughout the entire trout season and well into the extended season.

From the results of a recent survey, it would be quite a task to convince these sportsmen to go back to bucket stocking! Float stocking not only provides better trout fishing but has made trout fishing more attractive to serious anglers and has definitely increased the fishing pressure on the creeks of Dauphin County.

In the spring of 1969, The Dauphin County Anglers and Conservationists Club constructed the first stream improvement device in the county—a single log dam on Clarks Creek and



Dauphin County sportsmen turn out in force to assist with float stocking—now standard practice on every mile of approved trout water in the county. The trout are placed in float boxes and dipped out sparingly over the length of the stream. Lower right: This volunteer will soon disappear around the next bend—he may float stock another mile before he's finished.



the Upper Dauphin County Conservation Club also constructed a single log dam on the West Branch of Rattling Creek near Lykens. After several devices were constructed by these clubs, they began to realize the great expense involved in their construction and the number of projects had to be limited. Meanwhile, other clubs became interested in what was going on throughout the area and several other clubs became members of the County Federation; the Millersburg Gun and Conservation Club, the Harrisburg Postal Employees Pistol and Rifle Association, the Hummelstown Field and Stream Association and the Central Penn Rifle Association. Naturally, more clubs meant more money available, so it was decided that all stream improvement projects would be coordinated and financed by the Federation through the stream improvement chairman, Bob Youtz (D.C.A.C.). Bob worked very closely with me on most of the devices constructed in the county with the exception of the Rattling Creek project where assistant stream improvement coordinator Paul Foster was in charge.

After several projects were completed, it still proved to be too expensive to construct enough devices to show any real progress. In early 1971 it was decided that each club interested in stream improvement would pick a stream to work on and finance their own structures but all projects would still be coordinated through the Federation and under my direct supervision.

Noting this great interest, enthusiasm and determination *not to give up* and realizing the financial problems confronting these dedicated sportsmen, I contacted the Agriculture Stabilization Conservation Service and explained the situation. The A.S.C.S. came to the rescue! They agreed to set up a meeting with the landowners along Powells Creek in Powells Valley if I would present a program on stream improvement and explain what this type of work would do—not only for their property, but also for our environment. I agreed and presented a slide program showing the need of such improvement

devices in our streams. The meeting was somewhat of a success—six property owners signed up for stream improvement work to be constructed under the ASCS program! Under this program, the farmer or landowner would purchase the materials for the projects and would be reimbursed for 50% of the cost of the total construction. Needless to say, this was all the sportsmen needed to get them back on the stream again and in full operation!

While Federation members had an active conservation program in full swing, two teachers from the Halifax Area High School, Paul Wise and Kent Weller, with the approval of the District Superintendent, Marlin Zimmerman, and Principal Mark Drumheller, agreed to the formation of a Conservation Club within the school. They planned to allow the club of 50 students to dedicate one day a month to conservation and stream improvement on Powells Creek. Known as the Halifax Area School Conservation Club, they built a number of devices in cooperation with the Federation, the ASCS and the Pennsylvania Fish Commission under my supervision—incidentally, this club boasts three hard working feminine members!

The students started working on Powells Creek on a monthly basis in September of 1971 and worked right through the winter months—even on a day when the thermometer registered 36°! Water temperature was 34° and winds of 55 miles an hour were gusting through Powells Valley! It was really encouraging to see such enthusiasm and these students surely deserve a great deal of commendation for the fine work they've done.

Throughout the county, all stream improvement is again coordinated through the Federation coordinators, Bob Youtz and his assistant, Paul Foster. Mr. Youtz and I determine the sites and type of device to be constructed. A materials list is submitted to the landowner and the supplies are purchased. Upon completion of the structure, (which is constructed under my supervision) the landowner submits his bills to the ASCS and is reimbursed for 50% of the total cost of the improvement device.

To sum it all up and put it all together—since December, 1968, when the interest and motivation began, these Dauphin County sportsmen have come up with a package that



Bob Youtz, left, Stream Improvement Chairman of the Dauphin County Federation, receives the Federation's "CONSERVATIONIST OF THE YEAR" award from Executive Director Ralph W. Abele, guest speaker at the Federation annual banquet held April 22, 1972.

Below: Bob surveys, with apparent satisfaction, one of the devices placed on Clarks Creek.



consists of 46 stream improvement devices constructed, 770 miles of trout streams float stocked and three cooperative trout nurseries constructed (already in their second year of operation!) and two more nurseries in the planning stages!

In just four short years these sportsmen have alerted the public to the importance of conservation and what it means for our citizens of tomorrow. They certainly deserve a lot of credit, not only from fellow sportsmen but from the everyday citizen who will benefit from the efforts of these conservation-minded individuals. In my estimation they have displayed to the general public that a true sportsman is not just interested in catching and killing fish, but they are interested and *concerned* about our environment . . . not just for today, but for the future.





HALIFAX AREA HIGH SCHOOL

Conservation Club

receives—

PRESIDENTIAL AWARD OF EXCELLENCE

Halifax Area High School, Halifax, received the "Presidential Award of Excellence" for its outstanding contribution to its community through environmental achievement. In making the announcement, Edward W. Furia, Regional Administrator of the Middle Atlantic Region, U.S. Environmental Protection Agency said that Halifax was the first school within the Region to receive the citation.



MARK N. SILVERMAN

Mark N. Silverman, an official of EPA presented the award to the 52 students on behalf of President Nixon at a special ceremony in the high school auditorium on May 5, 1972.

Furia said Halifax was selected from more than 600 applicants for the Presidential award because of their outstanding efforts to clean up the Powells Creek in the Halifax area. "The students cleared the stream of all debris; constructed dams to improve conditions for the breeding of trout and constructed barriers to remove sedimentation from the bottom of the stream," Furia said. "Their efforts and accomplishments are a credit to their community and the entire Region."

The President's Environmental Awards Program, with the theme "Life—Pass It On," was established by President Nixon to recognize youth's efforts in improving the quality of life and the environment.

Although the program is relatively new, it has attracted response from more than 2300 high schools throughout the nation. Due to the enthusiastic response at the high school level, the program has been expanded to include elementary and junior high schools, as well as summer camp programs.

The Merit Award is given to students who take part in constructive, responsible projects in areas that range from educational achievement to involvement in governmental processes.

May 5th was really a day of "Firsts." The Pennsylvania Fish Commission, at its April 24th meeting, initiated the "PENNSYLVANIA FISH COMMISSION CONSERVATION AWARD" program and joined EPA in presenting the first award of this type to the Halifax Area School Conservation Club members.

The award is designed to encourage youth of Pennsylvania to study and become more knowledgeable in the areas of conservation, of the Commonwealth's aquatic environment and watercraft safety and to recognize individuals or organizations who guide to completion programs or projects which improve fish habitat; decrease pollution, enhance the natural beauty of water areas or provide increased fishing or boating opportunities for citizens of the Commonwealth.

Fair weather or foul, the club members turned out in force to complete the stream improvement devices constructed on Powells Creek. That "sledge-swinging-sister" (upper right) is Darlene Novinger, one of the club's representatives from the weaker (?) sex!

"This award will not come cheaply," said Ralph W. Abele, Executive Director. "The presentation of the Pennsylvania Fish Commission's CONSERVATION AWARD to the Halifax Club is significant in that, as the first of its kind, it will serve as a model of achievement for others to follow."

The award consists of a certificate to express the Commission's appreciation of the club's achievements and a cloth "arm patch" to be worn on an outer garment identifying the wearer as one who has significantly contributed to bettering our environment by personal action.



Executive Director Ralph W. Abele, center, is assisted by Waterways Patrolman Stepanski in presenting club member James Matter with his award.

The PENNSYLVANIA FISH COMMISSION CONSERVATION AWARD—certificate and arm patch, are shown below.



*Supplement those summer days
with a*

TURTLE STEW

by Kent Armstrong

What fisherman or outdoorsman that has seen a big snapping turtle on a trip into Penn's woods or waterways hasn't wondered what the Good Lord intended when he deposited them on this earth! A more cantankerous, ornery, ugly looking, foul smelling critter is hard to find. But how many have ever tasted a properly made bowl of turtle soup or stew? Not the *watered down* variety served in most restaurants at a fantastic price—but honest to goodness turtle soup.

Most people don't know how to catch a turtle let alone how to butcher and cook it. I didn't either until I asked an expert, the late Kenneth Jones of Guys Mills. Ken spent more hours of his 52 years hunting, fishing and trapping than any man I ever knew. He taught me his method of catching snappers and how to go about butchering them and finally to cook them. It is his method that I pass on to you here.

To catch a snapping turtle is extremely simple. Snappers are our largest freshwater turtle in Pennsylvania and will weigh up to 50 or 60 lbs. They lie in wait for their prey on the bottom or just under the surface of the water and dine on anything that they can catch. Their diet consists of young ducks, frogs, fish, clams, salamanders, plants and carrion. Snapping turtles are vicious to handle on land but not so bad under water. They usually lay their two dozen or so eggs in May, June or July. If it weren't for skunks, raccoons and other animals digging them up and eating them, the world would be overrun with turtles. Snappers live up to 20 or more years but are relatively short-lived compared with other turtles. All turtles can be used for food but the snapper is the most widely used. So let's get those snappers and enjoy a culinary delight.

Pennsylvania Law requires that

you use a hook at least 3½ inches long with a one inch gap between point and shank. Get a dozen or so of these hooks from your sporting goods store and a large roll of heavy nylon twine. Don't use cotton twine as it will rot if left in water over a long period of time. For bait you will need several chunks of bloody meat about two inches square. Any kind of meat will work, beef, woodchuck or anything you might have. The tougher it is the better—turtles might tear a tender bait off the hook. Next, find a farm pond, beaver dam, marsh or sluggish stream in which to set your hooks. Put a chunk of meat on a hook, tie on the nylon twine, throw the baited hook three or four feet out into the water and tie the twine to a bush or anchor stick and leave for a few hours. It's best to check them three or four times each day. When a turtle takes the bait he will attempt to swallow it and swim away. Because a turtle's neck is so tough, the hook may not penetrate well and they can work off.

The first hooks I ever set were in farm ponds about 200 feet across. I set 20 hooks about noon, returned about 3 p.m. and had eight big snappers and had possibly missed three or four more.

After you have caught your first turtle comes the butchering job. With this method you can usually butcher a big snapper in just a few minutes. Put the turtle on the ground, hold him down with your boot and with a pair of long handled pliers grasp his open jaw and stretch out his neck. Cut off his head as close to his jaw as possible so that you don't waste any of the excellent neck meat. Bury the head or dispose of it in some way as it can give a nasty bite for several hours. Now put the turtle in a pail of water and with a stiff brush scrub the dirt off. Put the turtle upside down on a clean board and with a sharp knife cut all around the inside

of the top shell. The bottom of the shell will cut away easily from the top part. Stand the turtle on his head, grasp the tail in your right hand and the top of the shell in the left and pull sharply down on the tail. Now grasp the tail in your left hand with the turtle still standing on his head and chop tail loose from the top shell with a cleaver or small axe. The turtle will still be attached at the base of the neck. With a clockwise turning of the top shell while holding the bottom of the turtle, the remaining point of resistance will break loose. Set the top shell aside and proceed to skin out the legs, tail and neck. Don't waste any of the meat but throw away all the fat you can cut off. Next cut the ribs loose from the top shell and remove the two strips of white meat along the back. If you have a female snapper with eggs in her, save them because they are delicious. You will be amazed at the amount of good eating in a turtle.

Cool the turtle meat for several hours in a pan of cold water. The two strips of white meat are too good to use in the stew. They should be fried like fish fillets. To make the stew put all but the white meat in a large pot and cover with water seasoned with salt. Simmer until the meat is fairly tender. Allow to cool until you can remove the meat from the bones. Cut the meat which you have removed from the bones into small pieces and put in a pan. Add a couple diced potatoes, two or three diced carrots, a small chopped onion and enough pepper to season. Add a couple cups of milk. Cook slowly until well done and serve piping hot. It's a meal fit for a king. Even my wife liked it and she won't eat most wild meats. Another way to fix it is to boil until done, roll in batter and deep fry like chicken. According to legend there are seven kinds of meat in a turtle but as far as I'm concerned there are just three: *GOOD*, *BETTER*, and *BEST*!

"Fit for a king!"



PANFISH, POPPERS & LAZY DAYS

by John Weiss

photos by the author



A large bluegill just seconds before it slammed a popper!

Spring fishing is usually fabulous, no matter where you live. In fact, it can be so great that many of us, who have grown restless during the winter months, jump the gun and start limbering up the old casting arm and look for patches of water that are free of ice.

But like all good things, spring fishing is short-lived. Seems as though we've barely had a chance to wet a line, and what happens? The scorching midsummer sun warms the water and forces the larger gamefish to deeper sanctuaries, where finding them can be very difficult, if not impossible.

As an outdoor writer it's my job to fish all over the country. I've battled pike in Canada, trout on the famed Battenkill in New York, and lunker bass in Florida. Travelling far distances during midsummer to seek out these fish is usually a waste, as fishing everywhere becomes very poor. And just like larger gamefish, even we have a tendency to eat little and just loll around and relax. I call these the *lazy* days.

But I'm such a nut on fishing that even during the lazy days I like to keep a line in the water someplace. Panfish fill the bill for me. Unlike larger gamefish, panfish are always ready and willing to do battle, even in hot weather under a blazing sun. They are found in large numbers almost everywhere. And they can be taken on very inexpensive gear.

Sadly though, many anglers will

either pass up fishing altogether during the summer months and hold off until the action picks up again in the fall. Or they'll continue to fish for the larger gamefish during the summer, do very poorly, and give up the sport. For these anglers summertime action can still be rewarding if they'll only seek out panfish.

But here comes the rub. Of the many anglers who switch to panfish during the summer, a great majority will *not* enjoy their sport as much as will others. The reason is simple; they'll head for their favorite fishin' hole with a cane pole and can of worms.

There's no doubt about it, live bait will indeed take fish but the truth of the matter is that the more experienced anglers *rarely use live bait*. They feel there's not much sport or fun in merely sitting on a river bank, watching a floating cork and hoping it will go under, signalling the bite of a fish. They would rather have the fast action that comes with using artificial baits. And when it comes to panfish—give me poppers anytime!

Since poppers are surface baits, the angler always sees the strike. And there's no thrill like having a fish, large or small, slam a bait on the surface, splashing water and all. Then too, when a fish strikes a surface lure he nearly always fights on the surface, which can mean spectacular jumps. If I had my choice, I would rather catch one fish on the

surface than ten down deep.

Bluegills, sunfish, rock bass, crappies, pumpkin seeds, perch and white bass are the species generally included in the panfish category. And if you think fishing for these is kid's stuff, just latch onto a two-pound bluegill or a three-pound crappie or a four-pound white bass and think again, after you've landed that monster! Still not convinced? Fillet a few perch, one of the world's best eating fish, fry them on the shore of your favorite lake until golden brown and I'm sure this will be the clincher.

If you've read this far I'm sure you're crazy about fishing and would like to have more fun with your sport, so let's get down to basics such as the selection and use of proper tackle.

As I said before, one of the reasons for the soaring popularity of panfish is that they can be easily taken on relatively inexpensive gear. So forget about that balanced, high-priced tackle that is needed for bass, trout or muskies. But even though the gear can be inexpensive, it must still be the right gear, and it must be used properly. Hammers and screwdrivers are inexpensive tools, yet no one would think of using a hammer to sink a screw into a piece of wood. The same applies to fishing. Select the right gear, even if it is not top-of-the line, and the job will be accomplished with ease and greater success.

Catching panfish means using a flyrod, period. With other types of tackle, such as spinning, spincasting

and baitcasting, you just can't cast the lightweight poppers or enjoy the fight put up by smaller fish.

Let's start with the fly reel first, which can be either an automatic one or a single-action. Choose which ever feels most comfortable to you, but keep the cost very low. If you have to trim expenses anywhere, pare down the cost of the reel, not the line or the rod. This might sound all wrong, but read on.

The fly reel plays no part in casting or in playing panfish. It's only function is to store the excess line you're not using at the moment. In fact, tournament casters don't even attach a fly reel to their rods when casting. They just let the unused line coil on the ground at their feet. So obtaining an expensive reel will only boost your ego—it won't do a thing for your fishing.

The ideal flyrod for panfishing should be between seven and eight feet long, depending upon how short or tall you are. A rod longer or shorter than this will only tire you out and impair your casting. The rod should be limber enough to allow you to enjoy the fight of a small fish, not stiff like a broomstick.

Rather than purchase a cheap flyrod, I like to rummage around closets or the basement, and find one that is of middle-class price range that has been set aside when a new rod was purchased. If you can't find one in your own home, a buddy is sure to have an old one he no longer uses. The amazing thing about fishing rods is that if they are of mediocre quality and have been given reasonable care they can last for 50 years.

So even though your "freebie" may look old and worn out, it probably still has good action and only needs a new coat of varnish and replacement of guide windings (a wonderful way to pass the time on cold wintry nights). I think this is enough background to give you an idea of the type of rod suited for panfishing. Just remember to keep it simple.

The line you select is very important, even in panfishing. In fly fishing you don't cast the artificial bait. Instead, you cast the heavy line and the featherweight artificial merely goes along for the ride. Unlike other fishing lines, fly lines are stated in "weight" rather than pounds test. And the line must match your rod if you want smooth, long casts. In panfishing a #6, #7 or #8 weight line will probably be the best. And the line should be a level one, not one

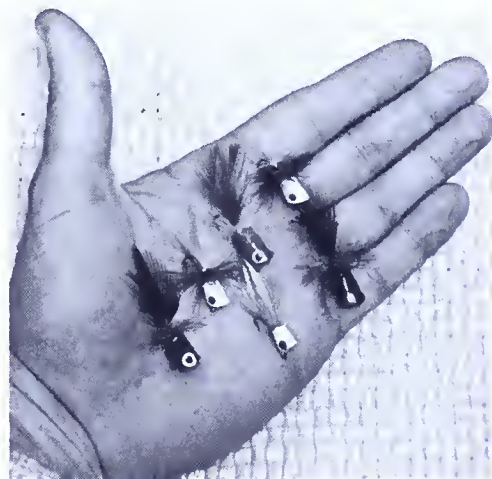
of the double-tapers or bug tapers that are normally used for trout and bass.

Of course, a double-taper or a bug taper can be used effectively for panfish, and fly line sizes and descriptions are much more complicated than I've indicated here. But the primary objective in seeking panfish is to keep the gear simple and low-cost, and a #7 level line will probably be the best bet for you if you're relatively new to flyfishing. If there's any doubt in your mind as to the proper line for your rod, check the manufacturer's label which is most likely attached to a new rod. This label will state the recommended line size for that particular rod. If no label is present, start out with a #7 line; switch then to a #8 if the seven-weight seems unsuitable.

The connection between your fly line and the popper must be a leader, which usually consists of a length of monofilament about eight feet long. If the poppers are extremely small and lightweight you might want to use a tapered leader with a tip testing about three pounds. These can be purchased ready-made for about a quarter apiece. For the larger wind-resistant poppers a stiffer leader is necessary. I avoid the new limp mono lines in this case and use a stiff line, sometimes going as high as twelve pounds test. The additional strength is not needed in panfishing, but the heavier leader is needed to "roll" the popper out and lay it down gently on the water.

Once all of your gear has been obtained it's time to rig up. The fly reel should be loaded with about fifty yards of backing; the best is usually fifteen pound braided nylon. I tie the backing to the reel with a "water" knot, the fly line is tied to the back-

Just a few of the many styles of poppers that are suitable for panfish.



ing with a "nail" knot, the leader is tied to the fly line also with a nail knot and the popper is tied to the leader with an improved "clinch" knot. All of these knots are specifically designed to be small in size, yet strong and slip-resistant with the monofilament. If you're not familiar with them, consult any book on knots or angler's manual. With a few minutes practice you'll soon pick up the knack.

Poppers must be small because panfish, even the large ones, have relatively small mouths. The best guide, as to size, is to select poppers whose plastic or cork bodies are about a half-inch long or about the size of a pencil eraser. A selection of flat-heads, bullet-heads and concave heads will fill the bill.

Some poppers have rubber legs, some have a bit of hackle attached to the hook. An assortment of each is always a good bet. Nationwide, the best colors seem to be yellow, white and black, in that order, though all may have eyes or feathers with a contrasting color.

Casting with fly tackle is not as difficult and mysterious as it may seem. With bluegills and other panfish you can practice for an hour in your backyard and have at it at your local lake this afternoon. Then, too time will improve your style and accuracy. I won't go into the actual technique of fly casting here. Most any fisherman's manual will show sequential photographs describing correct casting. Since panfish are extremely accommodating you can learn correct technique while you're enjoying the sport.

Where do you find panfish? Almost everywhere there's water. Just remember that panfish of all species prefer cover where they hide from larger fish who would make a meal of them in short order. Cast along the shore line, near weed beds, lily pads, brush and other types of cover and you're bound to see action soon.

Panfish spook easily. So practice laying your popper down on the surface of the water with a gentle "spat." Make a kerplunking splash like a mule falling off a bridge and you're bound to scare them away.

A general rule in working poppers is that you cannot fish one too slowly. Bluegills, sunfish, rockbass and pumpkinseeds rarely chase their food. They like to ease up to their food and watch it for a second before they dart the last four inches and slam it.

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*Well on their way to a distinguished place
in the memory book of another era are the . . .*

VANISHING BRIDGES

Of Yesteryear

by Wilbert Nathan Savage

Covered bridges—those well-built structures which once spanned streams in convenient numbers throughout every county in the State—are now disappearing from the countryside at a lamentably rapid rate. Durable as they were in their sturdy original form, the weight of punishing elements across too many decades has with steadily quickening impact begun to overtake the weathered memorials to a bygone age.

A typical example of the progressive failing of the old bridges' struggle for survival may be found in the fact that Bedford County once had 42 covered spans in regular use—more than any other county in the Commonwealth. Today that figure has been cut to less than a dozen. Many counties have no covered bridges at all; others only one or two. And almost everywhere they are visibly showing their age and becoming a bit more creaky as they feel the relentless time jolt of each passing season.

But one cannot wonder at the evidence that age is inexorably catching up with the scenic yesteryear structures. Many of them, such as the Bell's Mill Bridge in Westmoreland County, were built well over a century ago. In fact, the Bell's Mill Bridge was constructed in 1850 during the administration of Millard Fillmore, 13th President of the United

States. A few other covered bridges are even older, but over the years perhaps these generally have had the benefit of more regular routine maintenance and more extensive repairs. One example: Richel's Bridge, spanning Chillisquaque Creek in Northumberland County, was built in 1812 and is reputed to be the Nation's oldest covered bridge. However, it enjoyed the advantage of being rebuilt in 1962.

As one pauses to study the rustic outline of almost any existing Keystone covered bridge, the very atmosphere and locale of the scene tends to offer a token hint that here is a structure firmly linked to an unhurried period totally separate from the ways of this Twentieth Century interval. A long-ago time when buggies came in at least three sporty styles; when snow-covered but unpaved winter roads were lined with the gleaming tracks of sleighs and bob-sleds; when water-powered grist mills and village blacksmith shops were as common as modern-day service stations. And a time, too, when steam power came on the heels of the Conestoga Wagon; a time when watering troughs commonly contained a lazy trout or two; a time when roofing shingles were hand "rived" and spinning wheels hummed in parlors. A time when there were wheelwrights, tanners of leather, bar-

The ravages of the elements caught up with this old covered bridge on Stony Creek, near Shanksville, Somerset County—it collapsed a few years ago.

rel-makers (coopers), kerosene lamps, brown coffee mills, muzzle-loading rifles. A time when hand-made items included everything from harness to husking pegs; from ox yokes to treadmills. That was also the away-back-then time when fishhooks sold three or more for a penny in country stores; and if you didn't have a penny an egg would do.

As the then-to-now years rolled along, various forces battered away at the slowly weakening spans. Booming floods destroyed some covered bridges; others were swept by fire. In retrospect, then, it does seem scarcely less than miraculous that to this day a little over 300 of the roofed bridges still survive in 46 Penn's Woods counties. About 225 serve as regularly used passageways on public highways, with 35 of the bridges listed as State-owned. Amazingly, perhaps, about 85 of the aging structures have fallen into the hands of private owners. This type of extraordinary ownership is on occasion due to an arrangement in which an original grant for the bridge location was made by an individual who specified in the recorded terms that upon cessation of use the bridge would revert to the donor of the location, or his heirs. In most instances of this nature it was of course necessary for the land owner to possess property on both sides of the bridge stream. This is not to say that covered bridges haven't been purchased from townships or coun-

Barronvale Bridge (now bypassed) on Laurel Hill Creek, Somerset County is located upstream from King's bridge, about a mile off Route 653. During winter months when sleds and sleighs were in common use, the floors of covered bridges had to be "snowed" by hand in order to provide "a smooth passageway and to prevent dangerous sparks being struck from bare floors by the loaded horse-drawn conveyances."





The Carmichaels Bridge, on Old Town Street in the small town of Carmichaels, Greene County, is in good condition, was built in 1889. It spans Muddy Creek which, unhappily, is numbered among the polluted streams of the State.

ties: one abandoned covered bridge is known to have been sold to an individual bidder for \$55.

Some of the counties which do not have a single covered bridge left within their boundaries include Fayette, Centre, Huntingdon; Fulton, Tioga, Potter, McKean, Butler, Clarion, Venango, Crawford, Warren, Pike, Lackawanna, Forest, Elk, Cameron, and others.

One of the practical but oft-overlooked features of the covered bridge is the fact that it sometimes serves as a unique connecting link between counties whose boundary lines are partially marked by streams. Some examples: at two different points the counties of Washington and Greene are connected by covered bridges; York and Cumberland are connected by one covered span; three link Columbia with Northumberland; three also connect Lancaster with Chester; two serve as passageways from Juniata to Snyder; three do likewise between Dauphin and Northumberland; one serves between Montour and Northumberland; one between Delaware and Chester; and one between Lancaster and Dauphin. Quite understandably this linking of counties by covered bridges existed to a much greater extent before the old spans started to feel the unmistakable pinch of time—a period that probably began its hurry-up pace in the 1930's and relentlessly accelerated along a multiplying scale as time leaped from one decade to the next. The 1950's and 1960's saw a great reduction in the population of covered spans. And the 1970's will take an appalling toll of the esteemed but outmoded public service structures.

Today, Washington, Columbia, and Lancaster counties still have more covered bridges than any other six

counties in the State. In fact these three counties have a combined total of 75 covered bridges, not counting 17 that are privately owned! Compare this wealth of covered spans with the roofed bridges to be found in the counties of Armstrong, Westmoreland, Allegheny, Mercer, Erie, Susquehanna, Bradford, Clearfield, Cambria, Luzerne, Clinton, and Northampton—they have but one each.

Set out with determination to locate a dozen or two covered bridges—even in an area where they're still comparatively plentiful—and the finding will, as a rule, take some doing! Indeed, the yesteryear structures are often tucked so securely in remote valley settings that locating them becomes a baffling kind of game requiring both patience and a special facility for keeping a kind of mind-map guidance system in productive working order. But after a



Unfortunately, this covered bridge in Westmoreland County is situated on polluted Sewickley Creek. Built in 1850, this is the sturdy Bell's Mill Bridge. It is in fair condition, near village of Yukon. Note horizontal rather than vertical siding—a feature to be found on quite a few of the old Penn's Woods spans.

bouncy bout with dirt and reddog roads you at last peer through a lacy screen of birch and willow foliage and spot the elusive barnred outline of your first find. In this instance it happens to be a Washington County covered bridge.

There's a senior-age farmer mending fence along the narrow dirt road. You stop and make a few inquiries about the area's covered bridges. The farmer seems to welcome an opportunity to take time from his work as he pleasantly comments:

"We have a good many old covered bridges in both East Finley and West Finley townships. I know a little bit about most of them, but my father knew much more. He could recall when many of them were built. I can remember my father saying that get-

ting the okay for a bridge back in his younger days wasn't always easy. In fact, it often was discouraging and a slow process. Where there was no bridge, people in those times simply had to ford the creek at some convenient point—usually where it was shallow and with firm bottom. But when the water was high the stream just couldn't be forded with perishable items, and much of the time it couldn't be forded at all when the flow was flood-swift and high. The fords had names, like Willow Ford, Upper Ford, and Stony Ford.

"When residents of a settlement wanted a bridge, it was always best to have someone with influence to talk to the right people, and to convincingly point out all the pressing reasons that a bridge was badly needed. Along that line, it is claimed that two brothers named Pease were instrumental in getting approval for the building of what is now the Brownlee Bridge. For many years it was called the Pease Bridge and lots of folks around here still call it that. This particular bridge is on the Templeton Fork of Wheeling Creek. Six more covered bridges are on Wheeling Creek and Robinson's Run, over in the next valley. Used to be seven others, but Henry Ford bought one of them back in 1938 and had it moved to Greenfield Village up at Dearborn, Michigan. I guess he wanted to make sure that one of the old bridges would be preserved as a museum piece."

There was pathos in the farmer's voice as he concluded: "As man and boy I've fished beneath every covered bridge hereabouts. But I figure they may all be gone in a decade or so. And maybe me with them. . . ."

Thoughtfully you continue on past Plant's Bridge, just 24 feet long, and presently reach Longdon Bridge, which is 67½ feet long. You learn from a man living alone in a cabin

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King's Bridge, Somerset County. Over 125 feet long, and now bypassed, this bridge spans Laurel Hill Creek and is only a few rods from its modern replacement on Route 653 west of New Centerville. Built just after the middle of the 19th Century, it received rather extensive repairs in 1906.





"SHRIMP" Cookout

by Frederic Doyle

"With some willows and bark we made a drag, and hauled up the creek, and caught 318 fish of different kind, i.e., pike, bass, salmon, perch, redhorse, small cat, and a kind of perch called silverfish on the Ohio. I caught a shrimp precisely the shape, size, and flavor of those about New Orleans, and the lower Mississippi."

Thus wrote Captain William Clark of the well known Lewis and Clark Expedition in his journal on Wednesday, August 15th 1804 at his camp three miles northeast of a Maha village. This camp was located on the Missouri River in what is now the state of Nebraska. Quite some years ago I too caught a "shrimp" on a tributary of the Missouri River, and found it to have an excellent flavor.

However it is not necessary to travel half way across a continent to enjoy the fun of catching and cooking these "shrimp." Last summer with the trout and bass fishing in the hot weather doldrums I decided to go "shrimp fishing." Instead of constructing a willow and bark drag as used by Captain Clark I collected my minnow seine and bucket along with a kettle and camp stove, and drove to a rather secluded spot on a tributary of the Raystown Branch of the Juniata River in Bedford County.

With high hopes (and promises to my companions who accompanied me

for this outdoor shrimp dinner), I unloaded the gear and waded into the riffles of this small stream with the minnow net. Since the afternoon sun was hot, volunteers were soon splashing in the water helping to dislodge the shrimp from under stones and other hiding places, and soon I scooped out a sufficient number for the pot. Still fishing with chunks of meat for bait would have been a more leisurely way to catch the shrimp. They are usually to be found in greater numbers in fairly deep backwater, but patience and time are required to catch them by this method.

These "shrimp" depending upon the locality, are variously known as *Cabarus bartoni*, crayfish, crawdads, and crabs. They are also known by less complimentary terms by catfish and sucker fishermen who lose hooks and lines by having baited hooks dragged under rocks and sunken logs by these "crabs."

While biologists are able to detect a slight difference between crayfish here in the eastern states and those of the West, they appear the same to me. At least I could see no difference as they scooted backward in circles in the minnow pail.

I have since been informed that crayfish intended for human consumption should be caught and placed in a container of fresh water for a few days before using so that

they are purged of all waste matter. All of which is probably good advice, but not heeded on this occasion.

After heating a kettle of salted water to a rolling boil, I dumped the live shrimp into the pot, much to the consternation of the female onlookers. But consternation changed to wide-eyed wonder as the crayfish began to change color. As if by some kind of magic the dull brown of the crayfish suddenly changed to a deep red, even a deeper red, so it seemed to me, than boiled lobster.

In the shade of a maple tree a picnic table was set up. The shrimp were then spread out on a platter surrounded by small dishes of melted butter and lemon juice along with relish and a cold beverage. At first all were a bit hesitant about snipping off and peeling the tails of the shrimp and dipping them in butter. But after a time, while a flock of red wing blackbirds were hovering above a patch of cattails nearby, and scolding us for invading their territory, all were lamenting the fact that the shrimp were "all."

EDITOR'S NOTE: CRAYFISH ARE LEGALLY DEFINED AS "FISHBAIT" AND WHETHER USED AS SUCH OR AS FOOD THE "GATHERER" MUST POSSESS A CURRENT FISHING LICENSE (except children under license age) AND IS RESTRICTED TO A DAILY POSSESSION LIMIT OF 50.

“SPARKLE PLENTY”

for your lures

by C. Boyd Pfeiffer

Do your old fishing lures look drab? Lack fish appeal? Or have toothy critters scarred the finish of a new expensive plug? True, some lures of ancient vintage you may wish to retire to the den as scarred gladiators of the piscatorial wars. But there is an easy way to add sparkle to old lures with little cost.

The easily added sparkle is the same glittering material that you now see on many commercially made plugs. Called “Stardust”, “Glitter” and similar trade names, it is sold by both mail order houses dealing in how-to-do-it products for the fisherman and also is available in most department and variety stores as a decoration for presents and for hobby and craft kits.

Available in a variety of colors including gold, silver diamond, green and red, the material is extremely easy to add to any lure. First, clean and dry the lure thoroughly, especially if it is an old lure with a cracked or damaged finish. Next, coat the lure with paint or a clear lacquer, testing carefully first to make sure that the paint or lacquer that you are using will not cause a chemical reaction with the finish already on the lure. Use the clear waterproof lacquer if you wish to preserve the basic color of the lure and use paint if you wish to change the color of the lure or if the existing finish is badly damaged. Now, before the paint or lacquer has chance to dry out, sprinkle the glittering material on the plug wherever you want it to show.

Some of this glitter material comes in its own shakers. But for those brands of glitter that come only in a tube or bag, a salt shaker is a handy way to apply it just where you want it. You will want a shaker for each color of glitter that you are using since you may wish to add more than one color of glitter to one lure. Also, you can try mixing several colors of glitter in one shaker to give a mixed color effect on the finished lure. Be

sure to have a paper under the lure and shaker when adding the glitter so that any excess glitter can be added to the shaker again and not wasted. If using a clear lacquer, usually it is best to add a sparkle color that will complement the basic lure finish—gold on red or brown plugs and silver on white plugs.

Another way to add glitter to plugs when you want a lot of the glitter on the lure is to scatter a thick mat of glitter on a piece of wax paper and then roll the lacquer plug over the glitter in much the same way as rolling out some dough with a rolling pin. This has an added advantage in pressing the glitter into the lacquer of the plug and assuring a more permanent bond. Then hang the lures up to dry overnight.

After the paint or lacquer is completely dry, you may find that some of the glitter will flake off. Rub this loose glitter off, again saving what comes off for application to another lure. Then take the refinished lures and add a protective coating of clear waterproof lacquer to them. This protective coating will not affect the finish of the lure and will help to keep any more of the glitter material from coming off the plug.

Sparkle is best on salt water plugs and the minnow imitations that are used in both fresh and salt water. Striped bass, bluefish, barracuda and numerous other species of salt water fish are definitely attracted to the sparkle of lures and the simple application of glitter does wonders for the fish catching ability of plugs used for these fish. Fresh water fish go for it too, but not in as large doses. Thus, don't go overboard in adding glitter to all your plugs. Do some of each type and save some for the days when the fish are looking for a meal with a duller finish. Glitter on your lures is not guaranteed to add one more trick to your bag that will help you take fish on days when others aren't.



Above: Glitter in several colors, clear plastic spray, and some old lures are all that is needed.

Below: Spray clear plastic all over the lure or over those parts that you wish to cover with glitter.

Next, sprinkle the glitter all over the lure. The glitter will stick to the wet plastic spray coat.



Below: To get a denser pattern of glitter on the lure, first spray the lure, then roll it in glitter that has been sprinkled on a sheet of wax paper.



Below: Examples of lures—old and new—and a jig that have been treated with the glitter method of adding flash.





BRUCE LAKE

by John Selcher,
Fisheries Biologist
Management Section

illustrations: Lin Steiner

Bruce Lake is the first of a series of lakes surveyed by the Pennsylvania Fish Commission which will be described in coming issues of the *Pennsylvania Angler*. Our objective is to make data we have collected available to the fisherman with hopes that his fishing enjoyment and success will be enhanced. Perhaps before too many anxious anglers write directly to the Pennsylvania Fish Commission for specific information about their favorite lakes, we should state that we regretfully cannot perform

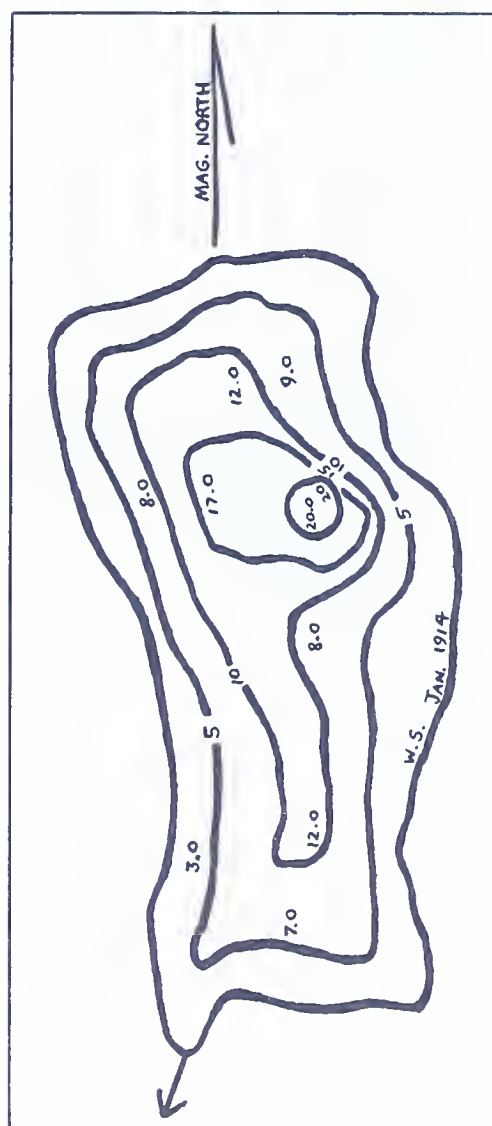
this service because of the lack of manpower and time required to process our data and present it in an understandable form.

Bruce Lake is a natural body of water located in a wilderness setting on State Forest land in Blooming Grove Township, Pike County. This lake, which has good fishing and very light angling pressure, can be reached only via a three mile hike off Pennsylvania Route 390. The trail is located about two miles north of Promised Land Lake, and no motor driven vehicles of any kind are allowed on it. Although some fishermen find it desirable to traverse the trail by bicycle, most fishermen prefer to absorb the splendor on foot.

Our purpose is not to describe every lake in the Commonwealth, but rather to publicize fishing areas with which many anglers are not acquainted. Instead of waiting for a report on your favorite lake, why not sample the fishing at one of the lakes we describe?

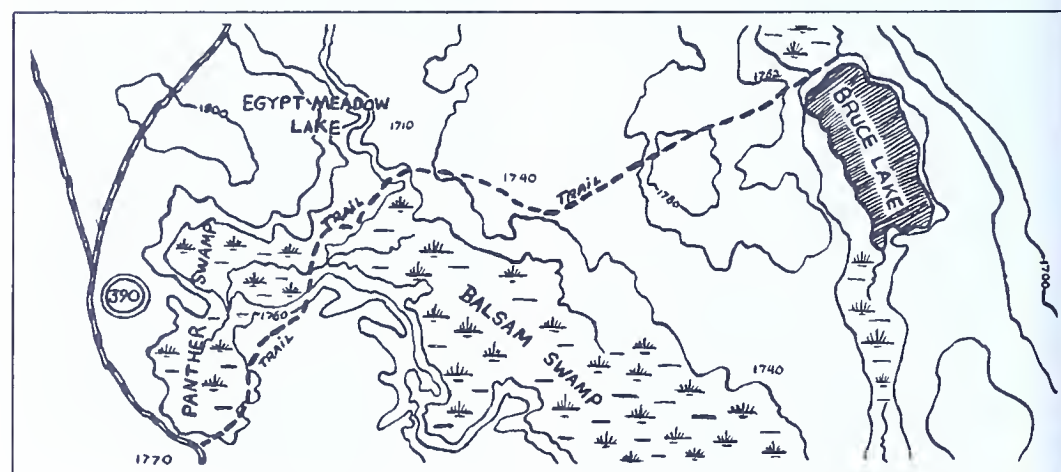
We have included physical, thermal, chemical, and biological data, and hopefully can relate this data in a form usable to the fisherman.

Unfortunately, during the most recent survey of Bruce Lake, the chemical and thermal measurements were not taken at the deepest point as they normally are on lake surveys. It is difficult to locate the deepest point in a natural lake, for unlike artificial impoundments which have their greatest depths near the dam, the location of the deepest water of a natural lake often can not be predicted without spending a considerable amount of time searching. The crew surveying Bruce Lake in 1969 did not realize that the lake was one of the few for which contour maps were available, so they measured the chemical and thermal profiles from the surface to the bottom at 13 feet.



Contour map (left) will aid anglers in searching out the deeper holes. Ed. NOTE: Contour maps are generally made by private research groups and the maps (nor any further information than printed here) are **NOT** available from any Fish Commission office.

Below: Sketch shows the wilderness trail (dotted line) leading to Bruce Lake, Pike County. It's a long walk but well worth it when the fish are biting.



Topography: Mountainous—100%
Lake Area: 50 Acres

Bedrock—10%
Fishing Intensity: Summer—Light

PHYSICAL DATA

Land Cover: Hardwoods—53%
Maximum Depth: 20 feet

Conifers—45%
Average Depth: 8 feet

Nature of Bottom
Sand and Gravel—70%

Muck—20%
Winter—Ice Fishing Prohibited

SPECIAL REGULATIONS:

BASS
(Largemouth or smallmouth)
PICKEREL
WALLEYE

Minimum Size
15"
20"
15"

Creel Limit
ONE (of either—but
not of both species)
ONE
ONE

BIOLOGICAL DATA

Species Name	Total No.	% of Catch	Catch per Hr	Growth Rate			Range	
				Poor	Ave.	Fast	Ave.	Size
Chain Pickerel	1	.20	.05			X	17.0	17.0 (1)
Largemouth Bass	1	.20	.05	X	X		16.9	16.9 (1)
Smallmouth Bass	18	3.10	.20			X	11.4	5.0-15.9
Walleye	7	1.20	.15			X	23.6	21.5-26.4
Yellow Perch	266	48.10	3.85		X		6.3	4.0-12.4
Pumpkinseed	72	13.10	1.00			X	7.2	5.5- 8.4
Bluegill	27	5.00	.40			X	7.9	6.5-10.4
Black Crappie	73	13.20	1.00			X	10.2	8.0-12.4
Brown Bullhead	44	8.00	.60				11.2	4.7-13.3
Yellow Bullhead	3	.50	.10				10.0	8.8-10.8
Golden Shiner	33	6.00	.50					
Eel	7	1.20	.15					

The deepest water was 20 feet and was not located at the center of the lake as can be seen from the lake contour map.

Both thermal and chemical data are potentially valuable to the angler. In this and future reports the angler should scan the dissolved oxygen measurements because during the day, warmwater gamefishes usually station themselves at depths where temperatures approach the optimum for the species and usually where the dissolved oxygen is above three parts per million. For example, the preferred temperature of some of the fishes of Pennsylvania are as follows: largemouth bass—80°F.; walleye—68-70°F.; rock bass—58.5-70.3°F.; yellow perch—68-70°F.; and smallmouth bass—68-70°F. Experience suggests that lunker largemouth bass may seek somewhat colder temperatures than 80°F. If the dissolved oxygen reading is above three parts per million at the level having optimum

temperature for a desirable species, that is the depth to fish.

After examining the temperature readings, it becomes apparent that measurements from the first 13 feet show that neither temperature nor lack of dissolved oxygen are acting to concentrate the gamefishes in Bruce Lake as they do in most reservoirs in Pennsylvania. In many reservoirs in the state during the summer there are no fish below 15 feet because of a lack of dissolved oxygen. However, the deepest water of Bruce Lake would probably be very productive during the daytime because of the cover it affords, in combination with its sufficient dissolved oxygen to satisfy the requirements of any of the fishes of the lake.

Biological data is undoubtedly of most interest to the majority of anglers. Almost any angler's curiosity is aroused when fishing a new lake. What species are present? What is their relative abundance? How big

are the walleyes, the largemouth bass, . . . ? The biological data sheet answers all these questions quantitatively. Although twelve species of fishes were caught in trap nets, the yellow perch comprised almost 50% of the catch. The large average sizes of nearly all the fishes in Bruce Lake are not typical, and the maximum sizes of the fishes are exceptional. In a single day the trap nets yielded a 26.4 inch walleye, a 15.9 inch smallmouth, a 16.9 inch largemouth, a 12.4 inch black crappie, a 12.4 inch yellow perch, a 8.4 inch pumpkinseed, and a 10.4 inch bluegill. For the average lake a single specimen of the size of any one of the species just reported in a week of trap netting would be considered typical. The average sizes of both the panfishes and gamefishes *far exceed* those of most of the lakes in our state.

The large average sizes of the fishes in Bruce Lake are not a product
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Thermal and Chemical Data

Depth Feet	Temp. F.	pH	M.O. ppm	D.O. ppm
Surf.	70	6.3		8.6
1	70			
2	70			
3	69.5			
4	69.5	4.5		
5	69	4.5	16	9.0
6	69			
7	69			
8	69			
9	68.5			
10	68.5	5.8	18	7.3
11	68			
12	68			
13	68	5.4	20	6.3

pH—a measure of the acidity or alkalinity of water. The usual range is 6.0 to 9.0, although in unusual circumstances acclimatized fishes can survive at a lower or higher pH.

M.O.—(Methyl Orange Alkalinity) a measure of the buffering capacity of water. Up to 40 parts per million of buffering agents (mostly calcium bicarbonate), the higher the M.O., the more productive the lake.

D.O.—a measure of dissolved oxygen expressed in parts per million. Most warmwater fishes require a minimum of 3 parts per million.

by arthur b. troup, jr.

a girl's first fish



Low, thick clouds the color of an old lead sinker were moving overhead, and a brisk air was putting a chop on Pymatuning. If it did not rain it was going to miss a good chance. A man and his daughter were out on the lake fishing, and the little girl was obviously not too impressed with the whole thing thus far. True, the first ten minutes or so had been tense with excitement, and she had watched her rod and line as though the Loch Ness monster itself was about to bite, but, now, after two hours or so, she was, well, she was dawdling with the rod.

"Daddy, I forgot, what's this we're doing?"

"We're trolling, Honey."

"That's right, trolling! And what's the thing I have on?"

"You have a flat fish on, Honey."

"That's right, and you have a spoon on your line?"

"Right!"

They became quiet. Each was lost in his own thoughts. The man studied the bottom of the boat, and the little girl studied some unseen thing on her knee. The man thought about quitting, about maybe another day would be better; the sandwiches were gone; the cookies were demolished; the lemonade was warm, and yet . . . wouldn't it be nice if . . .

"Daddy, I would rather use the other thing."

"What other thing, Honey?"

"The spinner thing."

"You mean the June-bug spinner and plastic worm?"

"That's right; the June-bug spinner and plastic worm."

"Okay; reel in."

"That's fun to say."

"What's fun to say?"

"June-bug spinner and a plastic worm."

She said it with a rock-and-roll beat and the man smiled. He changed the lure, adjusted the trolling sinker and watched as the twirling blade slipped under the waves and out of sight. The pair was fishing for walleyes and they had trolled, rolled and even jigged, but the walleyes were just not having any.

"Daddy?" . . . "Yes, Honey?"

"Are the fish really out to lunch?"

"I'm beginning to believe it, Honey."

"Daddy, if you were a walleye, what would you eat for lunch?"

"I guess I'd eat a minnie . . . maybe a whole bunch of minnies."

"A minnie! Well why don't we use minnies for bait?"

"Well, oh . . ."

"I mean, *Daddy!* As *smart* as you are! I think we need minnies!"

"I think you're right, Honey; let's go see what we can do."

An hour and a half, twenty miles, two chocolate milk shakes, and a pack of chewing gum later the pair was back on the lake. The man sounded the bottom over the stretch of water that they would drift and he found that it seemed to be about thirty-five feet. He tied on just the right hook, put two split shot about a foot or so up from the hook and attached a bobber for thirty-four feet. All this was done, of course, while answering a shower of questions. The man then caught a minnie out of the lemonade thermos and then, very carefully, put the point of the hook through the minnie's tail . . .

"Ouch!" . . . "What happened, Honey?"

"Nothing. Doesn't that hurt?"

"Well, I guess he doesn't like it, but it really shouldn't hurt."

"Oh . . . Now what do I do?"

"You watch the bobber; when it goes under the water, strike!"

"You mean like *this*?"

She demonstrated a strike that would have jerked a blue marlin clear of the water, and the man allowed as how that was probably just the right way to do it. Then he rigged the other line and soon two big red-and-white bobbers were bouncing along behind the boat. The man began to organize the tackle box after the rig changes, and the girl riveted her attention to her bobber.

"Daddy?" . . . "Yes?" . . . "My bobber's no good." "Why, Hon?" . . . "It sunk." "Honey, you either have a fish on or you're stuck to the bottom." "Shall I strike?" "I think you better!" "Like this?" . . . "Like that!"

This time it was for real and the rod made a very satisfying, quivering arc over the side of the boat. Her eyes wide and her lips pursed, the little girl reeled backwards while the man tangled the net in the oarlock. The walleye stuck to his appointed task and hung on.

"Reel frontwards, Honey!"

"Untangle the net, Daddy!"

Somehow they managed to boat the walleye, and it was a beauty. It was fat and heavy and measured over twenty inches. They celebrated with a stick of gum. Tired, hungry, chilly and one good fish made it a good time to quit, so the pair headed for home where, as the man fileted the fish, the little girl came up to his side.

"Daddy?" "What, Honey?" "Ask me a question." "Just what sort of a question would you like to have?" "Ask me what walleyes eat for lunch." "Okay. Marthy, what do walleyes eat for lunch?" "Minnies!" she giggled; and slammed the screen door on her way out to play.

A SPECIAL ANGLER FLOOD REPORT

Operation "Rescue"

Waterways Patrolmen have been good-naturedly dubbed everything from "PICKEREL-POLICE" and "BOAT-FUZZ" to names much less complimentary. But during those perilous days when Hurricane Agnes was running her destructive course, their presence on the scene and their expertise in boat handling spelled "RESCUE" for thousands of Pennsylvanians.

The skills of the Pennsylvania Fish Commission's Waterways Patrolmen, the result of many years experience and training, were brought to the fore during HURRICANE AGNES.

40 patrol craft were operated practically "around-the-clock" for three days in the swift, turbulent waters that covered many Pennsylvania cities and towns last June with only minor damage reported to one of the boats.

In stricken areas throughout the state these men and their deputies were directly responsible for the rescue and evacuation of thousands of flood victims and preliminary reports indicate they were also involved in a myriad of activities far removed from their normal line of duty.

Commenting on their activities, Executive Director Ralph W. Abele said, "During the flood, Pennsylvania Waterways Patrolmen again demonstrated that they are always ready, willing and able to serve the cause of safety on the waters of the Commonwealth. We are proud of the part they played in this disaster."

The following are brief excerpts from some of the reports submitted concerning their activities between Friday, June 23rd, and Monday, June 26th.

REGION IV (Southeastern Pennsylvania)

"Every available man in this region was involved in Flood Emergency Assistance. 17 Waterways Patrolmen and 46 Special Waterways Patrolmen joined Assistant Supervisor Kulikosky, Maintenance Foreman Ray Stichler and I throughout the region. 855 persons were evacuated in their patrol boats as they logged over 2,000 hours in the effort . . . the

value of personal property saved, boats, etc., is inestimable. This early report is only a token indication of their efforts during those four days of extreme emergency. They drove ambulances, they pumped cellars, they manned radios (one officer had over 500 emergency radio transmissions,) they operated city water plants and city sewage treatment plants. One officer salvaged hundreds of floating drums, containing explosive solvents and other highly volatile chemicals, from the Schuylkill River and averted possible further tragedy by requesting the lower Schuylkill be closed to boating when containers of gun cotton were reported floating downstream. Some men were isolated at their headquarters and assisted locally with traffic control and security details . . . I don't know of anyone who wasn't busy." Miles D. Witt, Supervisor, Annville.

LUZERNE COUNTY

"Special WWP's Dennis, Dembowski, Knecht, Murray and Slominski, using their own and Coast Guard boats, evacuated hundreds of persons from riverside communities in the county. Special WWP Joe Kipp shuttled evacuees to various centers by truck . . . we logged over 200 hours in flood emergency assistance. WCS Claude Neifert used a patrol boat to ferry two loads of food to a school where about 100 were stranded. In response to pleas for bags for sandbagging the dike, two thousand plastic 'Litter Bags' and 'Sea Bags' were provided from the REGION III office." WWP Edward W. Manhart, Dallas, Pa.

"Took patrol craft PA 124 FC from Pike County to aid in Wilkes-Barre evacuation . . . about 300 persons

were evacuated before we assisted local police in patrolling for looters . . . Special WWP Bob O'Hara spent 47 hours, drove to Luzerne County each day at his own expense, assisting in rescue and patrol work." WWP Joseph E. Bartley, Tafton, Pa.

"Had difficulty getting to a satisfactory launching area in Wilkes-Barre due to heavy traffic of sightseers . . . assisted Wilkes-Barre police patrol the inundated areas southwest of Mercy Hospital and into Hanover Township." WWP Frederick W. Ohlsen, Jim Thorpe, Pa.

"Special WWP's Yarema and Racavich assisted me in the Wilkes-Barre evacuation . . . about 175 people evacuated . . . sustained possible damage to prop housing." WWP Robert E. Fasching, Dalton, Pa.

WYOMING COUNTY

"Located 20 Boy Scouts camped along river between Tunkhannock and Falls . . . aided in rescue operations at Meshoppen, by boat and car . . . found leak in Lake Carey, supervised and assisted with sand bagging . . . assisted Tunkhannock police with anti-looting patrol in patrol boat." WWP Steve Shabbick, Tunkhannock, Pa.

"Salvaged boats . . . assisted in evacuation, can't recall how many, but every house on one street . . . had to move some of them twice, from one street to the next higher . . . assisted Civil Defense and local police in patrol for possible looting." Special WWP Paul Bogart, Falls, Pa.

ALLEGHENY COUNTY

"At Mon Valley Boat Club a complete floating dock was observed floating down the Monongahela River on

its way to destruction with vessels of all sizes tied fast and 3 men running about on the float . . . sent MAYDAY to Seneca Chief tow boat for assistance . . . with WWP Crayton and Special WWP's Kish and Milford, rescued the three men and saved 9 vessels before the dock broke apart at the bridge downstream from McKeesport. Coordinated a search and recovery detail using Allegheny County Special WWP's with a local CB radio club, State Police and the U.S. Coast Guard in Pittsburgh all cooperating . . . estimated damage to boats alone: 4 Million Dollars." WWP James Smith, White Oak.

HUNTINGDON COUNTY

"Point Access Area—all concrete block buildings completely washed away . . . sanitary facilities completely destroyed, banks eroded, road all but washed away . . . stranded at

headquarters for three days . . . assisted Civil Defense." WWP James Valentine, Huntingdon.

MIFFLIN & JUNIATA COUNTIES

"Completely isolated from rest of community until June 25th . . . assisted flood victims in neighborhood . . . removed Fish Commission equipment and records from headquarters basement which eventually was flooded with 4 feet of water . . . devastation in the district unbelievable . . . signs, trash cans and some trees gone at most access areas along Juniata River . . . only one toilet missing . . . debris cover all areas." WWP Richard Owens, Lewistown.

ARMSTRONG COUNTY

"Checked my patrol boat at the Kittanning Marina; no trailer was available to remove it and it was necessary for me to stay close by and

keep check on the river . . . the river continued to rise and become treacherous with boats and debris passing the area . . . we aided others at the Marina . . . Special WWP Campbell and I stayed with the boat through the night, pulling it in as the river came up . . . a call to Somerset in the morning brought Supervisor Qualters with a trailer . . . returned to my home and evacuated my family . . . spent the remainder of that day and night working the flood area to protect homes from looting." WWP Anthony Discavage, Kittanning.

FAYETTE COUNTY

"Many of the roads were closed . . . I assisted a man and woman whose car had flooded out along Chaney Run . . . took woman to my house then assisted the man remove the car and got it started again." WWP James R. Beatty, Farmington.

SALVAGE? or Larceny?

by Capt. C. E. Leising, USCG Ret.
Director, Bureau of Waterways

We like to think most recreational boatmen adhere to the old law of the sea which compels a master to speed to the rescue of a distressed vessel and render all assistance possible—the Good Samaritan.

But we can't forget that from the sea came also Pirates! HURRICANE AGNES brought both types into action. The question of salvage rights suddenly became important to many boat owners as well as to some who thought the storm had treated them most kindly by making boats available to sail or sell. They claimed to have gained possession by "salvage."

There is no clear and simple law of salvage. Each case is settled in Admiralty Court on its own merits but certain principles apply. First, a boat cannot be salvaged unless it is actually in distress. Unless the salvor has saved the boat from almost certain destruction or rescued it from a perilous situation, he cannot claim salvage rights. If the boat has already settled herself upon your property and stranded by receding waters so that risk of additional damage has

past, the boat cannot be "salvaged" . . . it can only be "found." And, as with other lost property, the finder is required by law to report his finding to some law enforcement agency that can locate the owner.

What the owner might wish to pay the finder for return of his boat is something to be worked out between the two parties and it might take a court to decide what would be a fair payment. But at *no* time does the finder gain any claim to ownership unless the owner abandons the boat. Naturally, the owner would wish to survey his boat and determine whether it's worth retrieving.

A really valid claim to salvage rights can be established by one who actually puts a line aboard a boat being swept to certain harm and brings her to a safe harbor. But here again, the case would have to go to court for a decision as to what the salvage efforts were worth, considering the risk involved and the probable damage that would have resulted.

Anyone finding a boat has an easy way to determine who the owner is. The registration number makes this

very simple and any person who either has learned who the owner is and made no attempt to inform him, or who has made no attempt to learn (i.e., by reporting his finding) opens himself to charges of larceny. Certainly, anyone who calls the owner and offers to tell him where his boat is "for a price" could be prosecuted. Obviously he knows who the owner is and is concealing property from the known rightful owner.

The real "pirates" who should be treated with the same contempt as that dealt in the days of Blackbeard are those who raided and looted boat yards, clubs and marinas after the equipment were removed to places of storm. Undoubtedly some boats and safety before or during the storm by well meaning persons who could properly expect a reward. Those who removed them after the danger had passed and really did nothing to protect the owner's rights will find little sympathy from the Pennsylvania Fish Commission or the courts and should be prepared to defend against charges of larceny.

Panfish Poppers & Lazy Days

continued from page 11

So the best retrieve is no retrieve at all. Once you cast, let the popper lie still for a full minute. If no strike comes, twitch the popper very gently, just enough to make it send out a few small ripples in the water, then let it rest again for another full minute.

When fishing for members of the sunfish family I like to slowly drift down a shoreline and work all the cover thoroughly. *This is lazy day fishing at its best.* With a cool drink and a companion, there's just no better way to spend the summer. Many times, however, I don't have a full day to devote to fishing, and driving to a faraway lake and launching a boat can be time consuming. Therefore a great deal of my panfishing is undertaken for an hour or two at small lakes and farm ponds in my area. Walking along the shoreline or donning a pair of waders seems the best bet in this case.

Of the panfish species mentioned so far, crappies and perch are extremely gregarious; that is, find one and there are bound to be many more nearby. Crappies can be often taken right on the surface, but perch

are usually deep water fish, unless they've been stocked in shallow lakes or farm ponds.

In crappie fishing the slowest retrieve will take the most fish. I like the bullet-head poppers for crappies because they can be worked very quietly.

If perch are found in shallow water they will take surface poppers, but if the water is deep you must use other lures or attach a split-shot a foot ahead of the popper to take it down. This is far from the sportiest way to fish for perch, but owing to their fine eating characteristics many resign themselves to enjoying the dining rather than the actual fishing.

Bluegills, sunfish, rock bass and other members of the sunfish family do not customarily travel in large schools, yet where there are favorable conditions there are bound to be many in close quarters. Again, seek out the cover they like, and work the lures very slowly.

A bluegill or sunfish can inhale an artificial bait and then eject it in a split second when he discovers it's not real. So you must keep all the slack out of your line and strike quickly or you'll miss 'em. With panfish you don't have to rear back like a stallion to set the hook as you might in fishing for larger gamefish. In fact, many fish such as the crappie have tender mouths and striking hard will only tear the hook loose. A gen-

tle flip of the rod tip or pull on the line is usually sufficient to set the hook.

Remember also that very long casts are only for the exhibition shows. When it comes to expert fishing, short accurate casts are much the better. I rarely cast over thirty feet when going after panfish but am able to place that popper in a spot the size of a dinner plate eight out of ten times. Accuracy such as this has enabled me to take well over one-hundred panfish in a single day's fishing.

I should add here that you need not worry about taking home too many panfish. They reproduce quickly, in fact too quickly for their own good, and the tragic result is that many ponds and lakes become overpopulated with them. When this happens the fish become stunted because there are too many of them for the available food supply. Fish biologists recommend that you take a mess home and put them in the freezer rather than return them to the water. Of course, just the opposite is true when it comes to bass, muskies, pike and the like.

Go on, give poppers and panfish a whirl this summer. I guarantee you'll never use live bait again. And since you won't be lazing away any more hot summer days under a shade tree I just might meet you down at the lake. Hope so!

Fishing Outlook

continued from page 3

let stand anything that does not reach up beyond the 25 to 30 foot depth. This will provide cover and shelter for both the game and the forage fishes—a built in sanctuary.

Past experiences in stocking and then posting a fishing area for several years has left a bad taste in the mouths of those concerned. First of all, posted areas are an invitation to poaching and these waters get to be a law enforcement problem. Secondly, when these waters are opened, great numbers of anglers are drawn to the area and in a short time the gamefish population is quickly unbalanced. Fishing, rather than getting gradually better until it reaches

its peak in 7 to 10 years—gets suddenly lousy! We have found that it's better to allow these areas to be opened to fishing throughout. Certainly a few fish will be lost through the taking of those undersized and some will also die as a result of deep-hooking but this will have relatively little effect on the total fish population. As the fish in the lake grow and establish some semblance of balance, fishing pressure will be light. As more and more legal fish are caught, pressure will increase until a happy medium is reached where anglers can catch fish in every age class of fish represented in the water. This is the goal and Raystown looks like its going to be a dandy.

Hope this answers some of your questions.

Sincerely,
Stan Paulakovich

SEARCH FOR Lost Boats Begun—

Pennsylvania's pleasure boat registration system will be used to help individuals locate boats lost in the June flood. If you lost a boat, contact your District Waterways Patrolman (his name, address and telephone number appear in both your pamphlet of Pleasure Boating Requirements and your Summary of Fishing Regulations and Laws), and give him as much information as you can—registration number, make and type of boat, serial number of the hull and motor.

Similarly, if you found a boat, you can use the same procedure in getting it back to its rightful owner. The "FINDERS-KEEPERS" philosophy does not apply to lost boats (see page 21).

KEYSTONE CAMPING

by Thad Bukowski

Camping Near Moraine

Most of the 845,000 largemouth bass stocked in Lake Arthur are still awaiting fishermen to catch them this summer. This is the first big season for this fishing and the bigmouth regularly range up to a foot long in the new Moraine Park complex just off U.S. 422 between Butler and New Castle.

Although no state campground is

place at the Stone House and one always approached the area with a certain caution. Some miles north along Rt. 19, near Leesburg, the Johnson Tavern which George Washington also used as a stopover point, has also been restored. Both places are open for visitation by groups interested in reviewing historical areas.

The Johnson Tavern is less than a



Pa. 528 which splits Lake Arthur of Moraine State Park, joins U.S. 422 with Rt. 8 at the Old Stone House near Slippery Rock. Two camping areas are within a half dozen miles on the north side near Slippery Rock.

slated for the park itself for a few more years, camping areas are found around the perimeter of the huge 15,000 acre park area. Pa. 528 which cuts across the lake with an impressive Causeway has two campsites along its 10 mile course. One new shaded site along Pa. 528 includes everything modern, capped by a heated swimming pool, laundry and grocery for the camper. Pa. 528 is in the stages of development as an Arboretum Trail by the Western Pennsylvania Conservancy, a conservation-minded organization which initiated construction of Moraine. The route is anchored at its northern end by the Old Stone House, near Slippery Rock and in the proximity is a unique nature area called the Blazing Star Prairie, located a few miles south of the Old Stone House. Eventually, the route is slated to harbor a great variety of the most beautiful flowering trees and shrubs of the state.

Quite a few moons ago, when I marveled at Slippery Rock State, stories went the rounds as to how one of the last Indian scalplings took

mile south of Neshannock Creek which received over 19,000 stocked trout in 1972.

A 1,200 foot swimming beach functions like a miniature new Coney Island along the southern shore of the Day Use Area which is the main park entrance off U.S. 422 just west of Prospect, Pa. This newly constructed, largest lake wholly within the Commonwealth had the gates of its dam locked three years ago in May. The Pennsylvania Fish Commission planted the fingerling bass in it at that time and also 8,000,000 walleye fry. By the end of 1969 the lake had received 32,000 muskie fry and a similar number of northerns plus 64,000 fingerling crappie bass and 16,000 adult crappies plus 16,000 fingerling catfish and 32,000 alewives were added as a forage fish.

The new lake also covered nearly a half dozen good farm bass ponds and lunkers were taken last season (as well as northerns) up to 28 inches long.

The Day Use Area has over 1,000 picnic tables and is a three-tiered site

from which the visitor overviews a beautiful panorama of the lake while picnicking. The 3,225 acre lake is a sailboater's paradise with motorboats limited to under 10 horsepower.

Water from the lake spills into Muddy Creek which in less than five miles reaches the Slippery Rock, a fabulous trout stream polluted since 1964. Just before the 1971 trout season opened, the Slippery Rock received 6,000 trout and a similar number during the summer after a \$750,000 Yellowboy water-restoration plant began to function on its north branch, where water is changed from pH 3.8 to 8.3.

A small group, the Slippery Rock Watershed Association, worked tirelessly for seven years to restore the watershed and their efforts should be noted as a monument to stream restoration in the state. The Association's efforts were greatly aided by the work of biologist Murray Shellgren and his students at Slippery Rock State and now a biological station is springing up on the extreme northwest end of Lake Arthur. Shellgren's group sampled water of Slippery Rock and Lake Arthur and its tributaries over a 365 day period and it was these strenuous efforts that de-

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A Unionville angler shown as he took a mixed catch of bullheads and panfish from Lake Arthur at the Prospect Causeway along Pa. 528.





NO SNAKES—POSITIVELY!

Before starting stream improvement work on the Little Buffalo Creek with a group of 4-H girls and boys, the days activities were planned. Girls, pick up litter along the stream banks; boys, install log dams. The number one question? "Are there any snakes here?" An immediate "No" was the reply. And as things sometimes happen, the first girl to pick up the first soda can received the surprise of her life! A small black snake had claimed the can and kept poking its head out the hole and sticking its tongue out at her as if to say, "Uh-uh, I was here first and litterbugs aren't so bad, they provided me with shelter." This snake lived in luxury He had a TV set, tires and four barrels of other trash to amuse himself with. While the girls were denying the homesteader his "creature comforts," the boys had installed two log dams, with an assist from some of the girls. Thank you 4-H Club members of Perry County.

H. Benjamin Leamer
WWP (Perry County)

CO-OP BROOKIES

Both the Oil City Chapter I. W.-L. A. and Polk State School are pleased that they have again had their cooperative nurseries stocked with brook trout.

Clarence W. Shearer
WWP (Venango County)

IT DOESN'T WORK!

Recently, Special Waterways Patrolman John Karlin went to Virgin Run Lake for a day of fishing. As he approached the small launching dock, a small boy with a ball cap slanted sideways on his head said to John, "Hey, mister it doesn't work!" When asked what wouldn't work, the reply was, "I was at your fishing school at Monroeville, and the man told me that if I had a diploma the fish would just bite on my hook—well mister, I've been here for two days and haven't had a bite yet!"

James R. Smith
WWP (Allegheny County)

SEE YOU NEXT YEAR!

While working the Cleveland Sport Boat and Travel Show, a young girl came to our booth. She was collecting literature like so many others and had one of our orange litter-bags. When I asked where she got it, she said her dad had bought a magazine last year and was given the bag. I gave her one of the new fisherman's bags since the orange one had been pretty well used. She was a happy girl and said she would bring the new one back next year!

Cloyd W. Hollen
Asst. Supervisor (Region 1)

HEADS UP!

One week I was leading the fish stocking procession along a local stream and as I approached an intersection, I noticed a car approaching with the left turn signal blinking. I slowed down and motioned to the driver to make his turn. As he was turning, he was looking at the fish truck and not where he was going. He drove smack into a dirt embankment, burying the grill clear to the headlights.

R. A. Bednarchik
WWP (Chester County)

DIFFERENT STORY!

One trout fisherman told me that the Fish Commission was stocking too many trout. I never thought I would hear that statement.

Bernard D. Ambrose
WWP (Elk County)

TROUT(?) RUN

Behind the new Elementary School in Clarion there is a small stream known as Trout Run. The only life in "Trout" Run is a form of bacteria . . . there are no fish. The students wanted to know what could be done to bring this stream back to life and to have it once again be proud of its name "TROUT" Run. Meetings have been set up with the faculty and members of the Youth Leadership Task Force and faculty members of Clarion State College who will assist in the forming of an Outdoor Workshop for the Elementary Students to

study nature, and thru stream improvement projects and some hard work, once again have Trout live in the waters of Trout Run. Hats off to a group of concerned students and teachers.

Robert J. Cortez
WWP (Clarion County)

ANGLER'S DELIGHT!

While accompanying Don Noll, a cameraman for KDKA TV in Pittsburgh, and a very pretty young lady he had brought with him to film the opening day crowd of fishermen at North Park Lake, we came across a fellow who was sleeping in a lawn chair by the lake. The young lady went over and tapped him on the shoulder and when he woke up, she asked him if he would show her how to fish. When he saw her, the expression on his face was one I will never forget. The young lady's fishing apparel consisted of old hat, fishing jacket, HOT PANTS, and GO-GO BOOTS! If the fellow got home in time for the 7:00 PM news that evening he could have seen himself on TV, as Don caught it all on film!

Gerald T. Crayton
WWP (N. Allegheny Co.)



"DREAMING OF THAT RECORD
TROUT AGAIN, CHARLES?"

NO PLACE LIKE HOME

Who needs the fabled mighty streams of the far west? One unidentified happy angler caught only half his limit, but—they were all over 20 inches! They were caught right in the Borough of Brookville on Redbank Creek in an area that we don't even stock!

H. Porter Duvall
WWP (Jefferson Co.)

"TRADE" ANYONE?

While on patrol of the Clarks Creek in the vicinity of the Children's Area and visiting a cooperative nursery food stand along the creek, a Mr. Les Witmer stopped by with a beautiful 20½ inch Brown Trout that he had just caught minutes earlier. While he was proudly showing his nice catch to everyone, a little girl from Lenkerville named Becky Hoffman, looked at the big fish and her eyes opened wide and a big smile came across her face. She paused for a moment and then seriously said—"Mr., I'll give you five small ones for that big one." Needless to say the happy fisherman did not take the deal.

*John E. Stepanski
WWP (Dauphin Co.)*

NEW TWIST!

A father told me this about his little girl on opening day. The family was getting their tackle ready to fish, so the mother strung up the little girl's rod and tackle. She then proceeded to get her own tackle in shape. She said to the little girl, "Put a worm on so that you can be ready to start." After a while the little girl said, "Mommy, I can't keep the worms on." Much to the mother's surprise instead of putting the worm on the hook the little girl was trying to tie the worm to the leader and it just wouldn't stay put!

*Kenneth Aley
WWP (Potter Co.)*

FOR ALL TO SEE—

This past month during a conversation with Special Waterways Patrolman Alex Chasar, Jay Johnston and Frank Rotchford, I learned of an interesting episode that concerns fighting litter. It seems that Mr. Chasar, when driving around on routine patrol in the Cooks Creek area, came upon a bunch of cans, bottles, etc., sitting along the brim of the highway. This made him curious as to why they were placed so neatly along the highway. Not much time passed until he had his answer. For just over the next hill, he came across a youth on his way home from the bus stop who was picking up beer cans and stacking them up along the road! Alex stopped his car to ask the youth what he was doing, and why? The youth told him that the passers-by who threw the bottles and cans out of the car windows couldn't see how many had accumulated in the

area. And he felt that he would put them where they could be readily reminded of the trash and debris they had thrown away. Since that incident, other youths have picked up the same practice in other areas of the county.

*Miles D. Witt
Region IV Supervisor*



"YOU CAN HAVE YOUR ASHES SCATTERED ALONG THE STREAM IF YOU WISH, BUT YOU'LL HAVE TO PROVIDE \$10.00 TO PAY THE FINE FOR LITTERING."

QUITE A VARIETY!

One evening while on patrol of Ten Mile Creek near Millsboro I was asking the fishermen that I checked if they had any luck. Here and there I heard a "couple bullheads" and even a few "channel cats." But when I checked one gentleman and asked if he had any luck he told me he had caught five. Being curious, I asked him, "Five of what?" He then proceeded to say that the first was a carp, the second a sucker, the third a bullhead, the fourth a channel cat and fifth a crappie! I guess we can safely say that the South Fork of Ten Mile Creek does offer a variety for the fisherman.

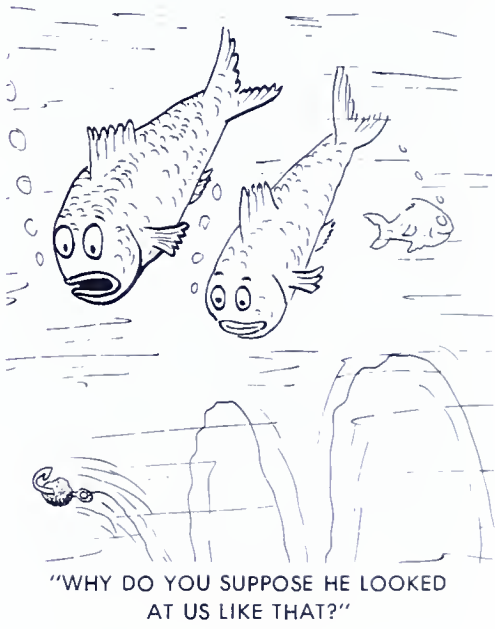
*Donald Hyatt
WWP (Greene Co.)*

WILL THEY EVER LEARN?

While checking boaters around Lake Wallenpaupack, I observed some fishermen launching a small aluminum boat. The numbers were not properly spaced, nor were they proper numbers and the validation was right next to the suffix! When I informed the owner that these numbers would have to be changed to meet the regulations, he started complaining about some of the regulations and that a person had to be rich to go boating or fishing anymore! When he started placing the motor on the

boat, I asked about lifesaving devices and he said he had three with him and six at home. One of the lifesaving devices turned out to be in good condition but the other two were not in serviceable condition due to tears and rips. I informed him then that he could not take the boat out with these devices and asked him why he brought these two bad ones along if he had so many good ones at home. He said "I use them to set the motor on to haul it." I pointed out that his lifesaving device should be one of the most important pieces of equipment in any boat because he might have to depend on it to save his life! It has been said that if a person can't get the numbers on right after receiving a booklet that has a picture to follow for the right pattern—how can you expect him to read any more of the booklet? I sometimes think there is more truth in this thinking than not.

*Joseph E. Bartley
WWP (Pike/Wayne Counties)*



"WHY DO YOU SUPPOSE HE LOOKED AT US LIKE THAT?"

STRANGE MATES!

Last April, after stocking trout in Quaker Lake, Susquehanna County, I was standing along shore talking with some fishermen. I noticed two fish coming in close to shore, swimming side by side, as they do when spawning. When they were close enough, I identified one as a rainbow trout the other a chain pickerel, both about the same length. We watched these fish for some time and the pickerel never left the side of the trout. Maybe they were just good friends or maybe a new species will develop? Who knows?

*Richard R. Roberts
WWP (Susquehanna Co.)*

Vanishing Bridges

continued from page 13

near the bridge that yours is the only car that has traveled the road all day—and it's now 4 p.m. You listen for some of the strangely absent sounds of civilization, pondering all the while the fact that houses along the road often were more than two miles apart. Happily, you hear nothing except a blue jay shrilling his cry from a lofty evergreen. Along the mucky edge of the creek you spot mink and raccoon tracks; and from an exposed patch of sun-dappled water a foot-long trout darts into "timbered crossing." Here you savor the greatest sampling of solitude that you've enjoyed in years. You chuckle as you recall that the man in the nearby cabin declared: "Mister, when my rooster crows, nobody hears him 'cept me."

Any traveler seeking out covered bridges almost anywhere in the State will quickly observe one thing: few of the old-time structures are located on paved roads. Furthermore, as one checks county road and stream maps, many listed village names are apt to stand out as unfamiliar or downright puzzling—even to an individual living in an adjoining county. Although certain names may be as novel as they are strange-sounding to outsiders, most of them have been around for a long time and to folk of the region they serve only as commonplace indicators of community identity.

In Washington County you can determine that you're in the heart of covered bridge country when you see a sign lettered "Good Intent," for at least six roofed bridges are in that area. There are also community names such as Ten Mile, Lone Pine, Prosperity, Rural Valley, Warrior's Point, Lover, Gambles, Twilight, and others. Southward, in neighboring Greene County, pursuit of additional covered bridge locations will bring you to or near hamlets bearing names such as Hope, Brave, Jollytown, Hero, Dry Tavern, Time, Nettle Hill, Gump, Wind Ridge, Live Easy, etc. Other counties possessing a wealth of covered bridges are almost certain to be supplied in some degree with out-of-the-ordinary place names—and anticipating a little extra charm in the identity of mapped localities adds a bonus to the triumph of ferreting out the historic memorials to another

period. As a start in other counties, you might begin with Bedford County's Patience or Lancaster County's Bird-in-Hand—both of which are in the general vicinity of several covered bridges.

The "laying out" of plans for a covered bridge required a considerable amount of knowledgeable engineering. Even a small error in the joining cuts on heavy beams could upset key assembly points throughout the massive framework.

Early bridges were fitted with end openings "a little more than a load of hay wide." The floor-surface width did vary, however, as we may note in the measurements of existing bridges. One may have an interior width of exactly 12 feet 10 inches, while another may be a precise 11 feet 7 inches. Still another will measure a uniform 14 feet wide, and so on.

If the bridge was much over 140 feet long, the support advantage of a center pier usually had to be provided. And since the all-wood structures were quite vulnerable to floods, the ends had to be raised on stone abutments wherever the height of natural stream banks failed to afford sufficient space between creek level and the bottom portion of the bridge. Of course approaches on either side had to be graded to accommodate elevated bridge openings. Even then, devastating floodwaters sometimes came up to pressure and damage bridge underpinnings, and at such times heavy floating objects often battered the roofed passageways with telling force. Naturally, because they served as a vital link for everybody from farmer to school child, and from doctor to peddler, damaged bridges were always given emergency consideration and repaired as quickly as possible; and "with such painstaking skill that traces of harm by high water oftentimes came remarkably close to being erased by the simple but exact methods of expert mending."

As one might suspect, design variations in covered bridges reflected the fact that architectural ideas of different men influenced individual bridge types. Among the men who engineered the original covered bridge patterns we find names such as Palmer, Burr, Whipple, Wernwag, Warren, Pratt, Town, Long, Powers, and others. The very first patent for a covered bridge design, however, was issued on January 21, 1797, to

Charles Wilson Peale. Peale was a Philadelphia artist who became famous for his paintings of George Washington. Strangely enough, Peale's bridge never got beyond his paper plans. Timothy Palmer was supposed to use Peale's patented design for the covered bridge he built across the Schuylkill River in Philadelphia. But when it was completed in 1804, a judge named Richard Peters was officially reported to have "authored the plan to make it a covered affair with a roof and sides boarded up, except for spaces left for windows. . . ."

The Burr truss type of covered bridge, involving laminated interior arches, came to be the most popular design in Pennsylvania. Originated by Theodore Burr in 1804, the pattern was for some unexplained reason not patented until 1817. However, after that year a royalty had to be paid to the inventor wherever the Burr truss pattern was used "according to the length of the bridge into which the patented idea was incorporated."

The cost of the average covered bridge seems to have been between one and three thousand dollars—and this included total cost of labor, materials, hauling, grading, etc. The lowest recorded cost for a covered bridge certainly would have to include the unrestored McGee's Mill Bridge in Clearfield County: it reportedly was built in 1873 for a mere \$175! In contrast, the Oyster Mill Bridge in East Pennsboro Township, Cumberland County, was built in 1881 at a cost of \$5,400. This span, however, was an exceptionally long one—408 feet. Fire destroyed this Conodoguinet Creek landmark in 1958.

The moderate construction cost of a typical covered bridge can easily be understood when we look at some actual cost figures. In 1857 bridge carpenters were paid sixty to sixty-five cents a day—a figure which, fortunately for the workmen, did include three meals daily. Four thousand feet of sound 2-inch oak floor planks brought a bill for only \$100; the heavy sills (of chestnut in one early record) were delivered for just \$25 total cost; siding for both sides of the bridge was priced at \$60; a full ten-hour day for a man and a team of horses could be had for two dollars and fifty cents; a man and his ox team were hired at just \$2 per day. Some small bridges were on oc-

casion partially assembled on dry ground, then skidded into place by heaving horses and men.

There is something about covered bridges that magnetically attracts fishermen. Could it be that mysterious dark shadows cast by the bridge may suggest rewarding possibilities? Or that lingering near the roofed structure offers a guarantee of ready shelter from a spring downpour? Or does the angler just happen to be a covered bridge fancier? Could it be that the locale stirs long-cherished memories of other years . . . other decades?

Not all creeks spanned by covered bridges are stocked trout streams, but many of them are. The author met one angler in Washington County who was in the area to sketch a few covered bridges—as well as to do some fishing. Where was he from? Newton Falls, Ohio. Other anglers fishing near or beneath covered bridges were later observed in Greene, Somerset, and Bradford counties. Significantly, not all of them were men: there were some lady anglers, too. And, contrary to what some male Waltonites hold as an unshakable opinion, those gals *did* seem to know exactly what they were doing! Indeed, while adroitly maneuvering a pair of hip boots, one blonde girl proudly announced that she had meticulously fashioned all of the flies she was using, and decried any suggestion that she had ever picked up a single worthwhile fragment of angling know-how from any member of the masculine gender!

Anyone interested in the basic design and architecture of covered bridges very likely would at once be surprised and fascinated upon ob-

serving in detail the clever workmanship and sound engineering techniques that went into the exact fitting of cumbersome bridge timbers neatly joined by mortise and tenon; the ingenious and durable method of splicing; the simple but resistance-keyed bracing schemes worked out with such precision that they defied improvement; the down-thrust ends of double laminated arches set deep in masonry at either end of the bridge, thus anchoring the reliable support devices which dutifully counter every pound of pressure exerted on the bridge floor.

Although the fact often appears to amaze many observers—even those who've seen numerous covered bridges—not all of the old roofed creek crossings were fitted with "bow timbers" or support arches. Some, particularly the shorter spans, depend on the Kingpost design—a method of construction utilizing heavy side-support timbers swung out at the base at either end like a wide-sweeping inverted V. At the top these were firmly joined to a massive center upright (Kingpost), while the outswung lower ends were pitched downward so they would reach maximum points and make solid contact with abutment masonry and end uprights. Angle bracing was then secured between the lower part of the Kingpost and the main side-support beams. This system of holding a bridge rigid and in place was dependable, but on the longer spans it was more apt to falter under extended stress situations which the arch design was able to handle with unyielding ease.

Few individuals will contradict the fact that one of the most serene reminders of our American heritage

is the covered bridge. They stand like rustic tributes to the imagination, the ingenuity, the perseverance of those belonging to the long-ago era of their horse and buggy hey-day. But no matter what sentimental values we may attach to covered bridges, the weathered image of each remaining one prophetically casts this realistic likelihood: before these lines reach print some of the vanishing bridges mentioned herein will inevitably have passed the way of many already lost to the unrelenting forces of time.

Oh, yes, societies and clubs and incorporated organizations battle regularly for the restoration and maintenance of existing covered bridges. Petitions are often circulated to responsibly implement the authoritative sparing of a particular bridge, and on occasion the citizens of a community will strike out on their own to wage a hot protest against destruction or removal of a covered span. (This recently occurred in and around the community of Ten Mile in Washington County when area residents successfully went to bat to prevent removal of the bypassed Hughes Bridge from its original site in Amwell Township).

But regardless of the number of modern-scene champions who may show up in defense of the ancient timbered crossings, the mechanics of progress will see to it that they are pressed steadily toward the day when the masterbuilt structures will survive only as curiosity items in parks, or perhaps in a museum. And toward the time when a child asks his elders if they can remember having seen a real, in-use covered bridge—and one by one the answer will come in negative nods.

"CRAZY AGNES" TAKES TOLL—

*number of covered bridges
remaining in Commonwealth
is further reduced*

Fortunately, the beautiful span pictured on our front cover is still standing. But statewide, the toll is mounting with each incoming report. Reports at presstime are incomplete but it would appear that Columbia County lost four and had nine damaged—fortunately, they are repairable. It appears that Lancaster County lost two. We hope to contact a representative of the Covered Bridge Society and publish a final figure in a future issue.

DID YOUR ANGLER "FLOAT" AWAY?

If your July issue of the PENNSYLVANIA ANGLER was lost as a result of the flood, we might be able to help you! We have a limited number available for subscribers whose copy may have been lost. Send us your name, address and ZIP CODE—print plainly.

IF YOU HAVE RELOCATED AS A RESULT OF THE FLOOD, PLEASE SEND US A CHANGE OF ADDRESS—GIVE BOTH YOUR OLD AND NEW ADDRESS, PLEASE.

BOATING

Questions & Answers

by Capt. Jack Ross

From K. R. K., Pitcairn:

"Is it possible to increase the power of a gasoline marine engine by supercharging, and what is the difference between a supercharger and a turbocharger?"

—In theory, the performance of any reciprocating engine will be increased if the compression ratio is raised. One method of achieving this is to pack more air into the cylinder before the piston starts up on the compression stroke, and this is usually accomplished by either a supercharger, which is a blower or low-pressure air compressor driven by belts or gears, or a turbocharger, which utilizes the exhaust gases to spin a turbine which is mounted on the same shaft as the blower or compressor. Naturally, the fuel feed to the cylinders must be increased, and for this reason some type of fuel-injection system is ordinarily used on an artificially aspirated engine. Carburetors do not take kindly to positive pressures down the throat. A further consideration is whether the engine will stand the additional stresses and heat load imposed by supercharging. Generally, only those engines which have been designed for optional supercharging, such as most diesels, can be converted successfully.



From W. F. L., Edinboro:

"My 1953 Johnson 25 hp. outboard runs very well, but the plugs keep fouling. Can I use a hotter spark plug in this engine, and if so, what number would it be?"

—The original specification for this engine called for a J6J spark plug. A J7J is the next hotter plug, followed by a J8J, and so on. Try the hotter plugs, one step at a time, until you find one that gives reasonable service. Keep in mind that a plug too

hot for the engine will cause pre-ignition and knocking that could damage the motor.



From G. R., Monongahela:

"The six-cylinder Chrysler engine in my runabout keeps blowing head gaskets, no matter what kind of cement I use or how hard the nuts are tightened down—what do you suggest?"

—It sounds like your head may be warped, and you should take it to an automotive machine shop where it can be checked, and planed level if necessary. This is a not-too-rare problem with Chrysler straight sixes and eights, and often results from improper torqueing of the head nuts. When reinstalling your head, be sure to start from the center, working along the center line of studs toward each end, then the outside rows alternately from the center toward each end. Finish by tightening cold to 40 foot/pounds of torque, then recheck all the nuts after the engine has been run up to temperature and cooled back down. Use a copper-clad head gasket, and apply Permatex gasket cement to both sides.



From C. B., Rimersburg:

"Neither galvanized steel nor brass screws have proved successful in attaching accessories to my aluminum outboard hull. What metal should be used for these fasteners?"

—The best metal for nuts, bolts or screws to be used in contact with aluminum is monel, followed by Type 302 or 304 stainless steel. All of these are available in common sizes of hardware, including flat and lock washers.

From B. T., Pittsburgh:

"Is it true that oil drums will be outlawed for use in building floating docks on the river?"

—Not within the very near future. Certain reservoirs and lakes have prohibited the use of drums, since these eventually sink and fill up the impoundment. This does not appear to be a problem on the rivers, and at the present time this subject is not even under serious consideration.

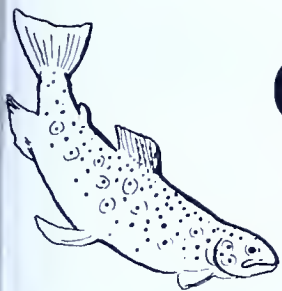


From J. C., Sharon:

"What Rules of the Road are applicable on Shenango Reservoir?"

—Since the Shenango River is a tributary of the Beaver, which in turn empties into the Ohio, the Western Rivers Rules would apply on the reservoir. According to federal statutes, the Western Rivers include all waters draining into the Mississippi, plus a few other connecting waterways near the Gulf of Mexico.

(Although Western Rivers Rules apply, there are no significant differences as to operation—the main one being the privilege given the descending vessel to select how he wishes to pass an ascending vessel in the river. This, of course, would mean nothing to the recreational boater on Shenango Lake. There, as everywhere, the best rule to follow is to stay alert as to what is developing and to alter speed or course sufficiently early so as to avoid circumstances which require dependence upon special passing rules. Most of the Rules are written for large, commercial craft which are restricted by their size and maneuverability to stay in dredged channels; operators of most recreational vessels are not so restricted and there is seldom any good reason why they should ever get into such a tight situation that an exchange of signals becomes necessary.—Capt. C. E. Leising, Director, Bureau of Waterways.)

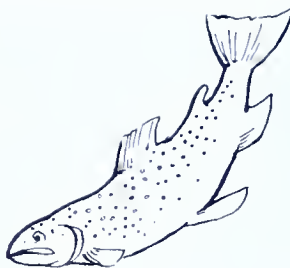


CASTING

WITH THE

CO-OPS

BY BILL PORTER



"A Plumber's Nightmare" was Clark Weaver's description of the Marysville Sportsmen's Bowers Run Nursery! The Perry County installation might just be that and Clark, as its creator, has the right to say it.

Now for the details. The club, in its third year of operation, has had more than its share of problems. It is the dedication of its members that have kept the project going in spite of the odds.

The odds represented a loss of site, disease, and severe water problems. Instead of a cement-block raceway, four screened baskets were built and placed in two streams. This doubled the feeding time, added additional travel for the rotating feeders, and made nursery observation more difficult.

Furunculosis developed in the baskets at one site and nearly 400 trout were lost before the condition was brought under control with a venison-liver diet plus treated pellets. The survivors were transferred to the Bowers Run area and additional special feeding and treatment was continued. Occasional outbreaks of furunculosis continued in the Number Three basket; none of the others was affected.

The second year of operation was fairly normal for the Marysville sportsmen. Precautions were taken, however, and the trout were started on venison for about a month and fed some teramyacin pellets as preventive devices.

Someplace along the line, when things started to look good, the water ran out. What had been a stream became a trickle and ten gallons per minute would have looked like a flood. Again, the dedication and ingenuity of the members came to the fore with Clark Weaver, Mel Fertenbaugh, and Harold Weaver leading the way.

Initially, the baskets, instead of being set in the stream, were dug in to the bottom—literally buried. It took about 90 yards of stream to set the five 12-foot baskets. This helped, but more work was needed.

Plywood siding and bottoms were added and the ground was built up so that all available water would be forced through the baskets rather than around them. The baskets actually became the total stream.

Clark and Mel worked hard through the summer, rigging a series of pipes and "pans" from one basket to another. It was said, not entirely as a joke, that these fellows and others working on the project even used the sweat from their brows to add a couple more drops of water to the stream.

The "plumber's nightmare" construction wasn't really a Rube Goldberg affair but was an ingenious set of pipes to conserve every drop of



"The Plumber's Nightmare"

water. Clark Weaver, responsible for the design, trapped the water at the intake system and funneled it through each basket. Elbows were built to take care of stream bed turns and twists. Plastic pipe was used to maintain the rapid flow where the drop and twists required too many elbows for the metal pipe to be effective. These pipes were carefully fitted to prevent leaks and "pans" were rigged at the lower end of each basket to feed the water to the next one downstream. The "pans" were metal troughs that caught all water flowing through a basket and led it to the next pipe. Again, specific attention was given to eliminating all leaks.

Valves were placed in the pipe ends entering each basket. By constricting the opening, the rate of flow remained fairly strong in spite of a reduced volume. Aeration was maintained by the same process.

The system worked! In fact it worked so well that a fifth basket was added last year. An incidental benefit to the basket system was the elimination of silt. Once the water entered the first pipe at the intake, it never touched the ground again until it ran out the bottom end of the fifth basket. Surface debris was also a minimum issue because of the pipes and the top screens.

The system should not only be seen to be believed, but it also should be observed closely by those clubs with severe water problems and limited site choices. These clubs should contact Bob Brown, Chief, Cooperative Nurseries, or Ben Leamer, Waterways Patrolman for Perry County, for further details and contact with the Marysville group.

Now the story would seem to be at an end, but it isn't. Claude Bowers, property owner and member, passed away after a long illness. The use of the site was in doubt and the water problems posed a constant threat over continued operation. So it was decided to move the nursery to an area where more conventional construction and fewer problems would be involved.

A site at Lamb's Gap has been approved and a 50-foot cement-block raceway will soon be completed. Robert Magaro, property owner, has given the club a ten-year lease, a half acre of ground and access with no charge to the club. Once finished, the new nursery will be dedicated to and named after Claude Bowers, who had contributed to the success of the original project.

About 2,000 trout are raised each year for stocking in Fishing Creek and Lamb's Gap. All of which says that with a little fortitude and perseverance, the Marysville Club has proved that their efforts have paid off for those *Casting with the Co-ops* in that part of Perry County.

AT PRESSTIME, the reports coming in would indicate some severe losses at some of the **COOPERATIVE NURSERIES** scattered throughout the state. Although we don't have complete details at this time, we hope to be able to give a **STATEWIDE** report of how the **CO-OPers** fared during the disastrous flood of 1972 in a future issue. Ed.

A FISHING FEATURE FOR FISHERMEN FROM FISHERMEN

FISH TALES

by Doris Katsonis

FISHING certainly has been good in PENNSYLVANIA! So good, in fact, that we are unable to publish all the photos we receive from our readers—much as we would like to.

Only photos of CITATION size fish will be accepted for future use in our FISH TALES section.

(SIZE REQUIREMENTS ARE LISTED BELOW)

Each photo should carry complete information on the back. Include: name and address, species, length, weight, when and where caught, and the bait or lure used. PRINT PLAINLY—but do not press with a ball point pen—we cannot use photos with writing "showing through" or those which are cracked, blurred or poorly exposed.

	Jr.	Sr.		Jr.	Sr.
American Shad	20"	25"	Fallfish	14"	18"
Bluegill	10"	11"	Lake Trout	24"	30"
Brook Trout	14"	17"	Largemouth Bass	18"	23"
Brown Trout	18"	28"	Muskellunge	30"	45"
Bullhead, Catfish	14"	15"	Northern Pike	25"	36"
Carp	25"	36"	Rainbow Trout	18"	27"
Chain Pickerel	23"	25"	Rock Bass	10"	11"
Channel Catfish	20"	30"	Smallmouth Bass	18"	20"
Crappies (black & white)	14"	15"	Walleye	22"	30"
Eel	30"	40"	Yellow Perch	12"	14"

IMPORTANT: Citations are awarded for fish caught in PUBLIC WATERS ONLY! Waters must be open to fishing by the general public without payment of fee.

STEVE CHARACK of Duquesne holds his huge musky, the largest reported this year. He landed it from the Pymatuning Lake spillway using a minnow on a #6 hook. It measured 51½ inches and weighed 44¾ lbs.



14 year old DALE SPINELLI of Erie caught his nice 23½-inch rainbow trout while ice fishing from the gravel pit in Fairview last February. He caught it on a live minnow and it weighed 3½ pounds.



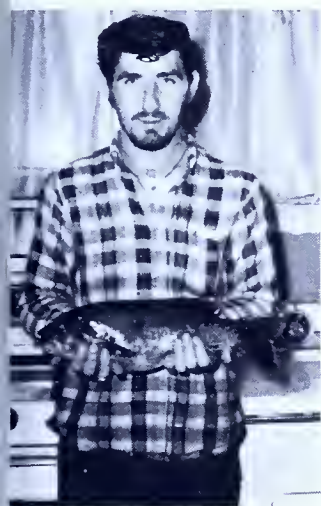
Little MONTE YARNELL, age 6, of Bellefonte caught his big 23-inch brown trout on opening day from Logan Branch in Center County. He caught it on a worm and it weighed 4½ lbs.



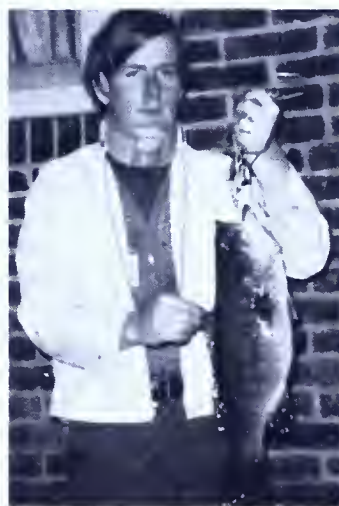
Another tyke, STEVEN MILLER, age 6, of Schnecksville, caught his 25-inch chain pickerel while ice fishing with a tip-up and a shiner on Pecks Pond in Pike Co. last March. It weighed 4-5/8 lbs.



It takes three to hold MIKE WEAVER's northern pike, a 39-inch 15 lb. beauty, taken from Long Arm Dam in York Co. while MICHAEL DAVIS (right) of N. Versailles holds the 20-inch smallmouth bass he caught from the Allegheny River. ANDY WERNER of Staten Island (far right) caught the yellow perch, a 12-inch, from the Delaware River in Pike Co.



ARTHUR FLYNN of Portage caught his 20-inch, 4¼ lb., smallmouth bass from the Raystown Dam last October. It hit a jitterbug. A Pittsburgh angler, NORBERT KUCZMA (right) caught his nice 11-inch bluegill while spin casting with nightcrawlers at Raccoon Lake also in October.



These two fishermen, ALFRED KIRK of Philadelphia (left) and ALBERT SCHOLL of Lewisburg, caught identical smallmouth bass—20½-inch, 4-1/8 lbs. Al S. landed his from the Susquehanna River while Al K. took his from Neshaminy Creek in Bucks Co. using spinning equipment and a worm.



BOB O'BRIEN of N. Versailles proudly holds the 45 inch, 22 lb., musky he landed at Canadohta Lake in Crawford Co. while trolling last September. He was using a #4 Mepps silver spinner.



14-year old HARLEN GESSNER of Paxinos displays the 10-inch bluegill taken from a public farm pond in Northumberland County using spinning equipment and a grasshopper last September. It weighed 10 ounces.



A Brackenridge youth, RICK GULA, displays his 23-inch walleye taken from Tionesta Lake overflow, using spinning gear and a sucker, last August. It weighed six pounds.



ED BELL of Pittsburgh (left) caught his huge catfish, a 34¼ inch—14 pound trophy, from the Allegheny River in Forest County, while CHARLES GROSS of York Haven caught his 25½-inch walleye, using a homemade bucktail, from the York Haven Dam.



Young MICHAEL LORENZO of Flourtown holds the nice 13½-inch, one pound, yellow perch he caught from Lake Wallenpaupack last June and JIM ROTH (right) of Sunbury holds his 20-inch rainbow trout taken from Fishing Creek in Potter County in April.



This 1,200 foot swimming beach provides summer recreation seekers plenty of enjoyment at Lake Arthur.

Keystone Camping

continued from page 23

terminated the exact location for the Yellowboy plant.

The Slippery Rock is big and dangerous water during the early fishing seasons. These seasons were bad for the past two years due to excessive rain, so the angler who knows his flyrod and can use summer terrestrials with about a half-pound test tippet can find some fancy trout angling in August from Plain Grove to Heinz Camp, a stretch of over six miles. Best fishing is from above the village of Harlansburg, downstream

beyond McConnel Mill, another State Park area on the creek. This spring 6,000 browns were again planted and an additional in-season stocking of 1,000 pounds was placed in the waters in mid-May.

From Rose Point right at U.S. 422 downstream to McConnell Mill and beyond, is one of the most beautiful stretches of gorge anywhere in the state, hidden in a steep-sided hemlocked valley. Rose Point has two camping areas near the junction of U.S. 422 and Rt. 19.

Bruce Lake

continued from page 17

of chance. The increased size and decreased creel regulations controlling the harvest of gamefishes tends to reduce the size of the harvest while producing a quality fishery. Such a fishery produces fishes of large average size and is possible on heavily-fished lakes only when appropriate regulations are instituted. Strict regulations alone will reduce fishing pressure by tending to eliminate anglers interested in food and sport as contrasted to those angling for sport alone. The gamefishes in Bruce Lake comprised a much higher percentage of the total population than do gamefishes in lakes with no special regulations. The elevated population of predators (gamefishes) helps prevent the panfishes from becoming stunted. Although special regulations are not conducive to a maximum harvest, their existence on scattered lakes

throughout the state provides anglers with a quality fishery not normally available on lakes with less stringent regulations.

After examining the biological data presented, some anglers might be led to believe that all of the fish in the entire lake were captured by the trap nets. The trap net is only a sampling device, and its job is to sample the fish population, not to count it directly. Stated in another way, the trap net is a passive netting device in which the fish must catch themselves. The principle is similar to that of a common minnow trap. Probably less than three per cent of the actual fish population of Bruce Lake was captured in the nets. Some species are not very susceptible to trap netting, although they might actually be very abundant in the lake. A good example is the largemouth bass which regards a trap net as a six-year-old regards a bath . . . an invention to be avoided.



Waterways Patrolman Joe Bartley proudly displays one of the fine walleyes captured in the survey.

In summary, we think you will like Bruce Lake. Although special creel and size regulations are in effect, the wilderness surroundings and the extremely well-balanced fish population make a fishing trip there well worth the three mile hike.



THANKS!
for nothing

Our Waterways Patrolmen are unique individuals—in so many ways. For example, while they are employees of the Pennsylvania Fish Commission, they fight for the anglers and boaters using the fishing and boating facilities within their district. "More access is needed on River 'X'"—"Stream A is receiving entirely too few trout—"

WWP Joe Bartley is no exception. For 17 years he has fought for Pike County and its visitors. And yet on a number of occasions Joe has found nice trout catches disposed of in the trash cans at the access areas in his district. "I think it's about time we call this kind of fisherman by his right name!" says Joe. We would Joe—except for Postal Regulations, we would!

TAKING A CLOSER LOOK

by Tom Fegely

MEET "MR. WRINKLES"



Wrinkled, big and ugly—the hellbender has the distinction of being the largest and longest lived salamander in the U.S.

I'd hardly wet my catfish line when I heard the scream. Across the Allegheny, along a shallow inlet, an elderly man and woman peered inquisitively over the side of their small row boat. The woman's rod arched—the tip piercing the rippled water. I watched for several minutes, all the while wondering why no attempt was being made to boat the catch. Finally her husband grabbed the line, lifted it high and cut it.

Later I had the chance to talk to the couple. The woman proceeded to describe the "monster" that had taken her tangle of worms. Although the description seemed embellished by her evident excitement and her puzzlement, I knew immediately that she had hooked a *hellbender*.

The couple's reaction to the hellbender was typical of many other angler's encounters with this oversized amphibian. Although harmless, the hellbender has been known to inflict a somewhat painful nip. One look at this giant salamander is enough to discourage human intruders.

The hellbender is characterized by its vertically flattened tail, which is used in swimming, and the loose wrinkled skin covering the entire body. These wrinkles increase con-

siderably the skin surface area through which all salamanders draw some of their oxygen. A coating of mucous on the skin makes the hellbender practically impossible to hold.

COMMON IN WESTERN PART OF STATE

"*Cryptobranchus alleganiensis*," as the hellbender is known scientifically, occurs principally in the Ohio drainage but has been recorded in the Susquehanna. Preferring fast-flowing waters to ponds or lakes, hellbenders seldom move about during the day. At night they crawl along the bottom in search of crayfish, worms, aquatic insects and an occasional dead fish. Small hellbenders in turn are fed upon by larger fish.

During late August and September hellbenders migrate to "breeding pools" where they congregate. There the males excavate saucer-shaped nests beneath large rocks. Females are then lured into the nest where she proceeds to lay three to four hundred eggs in a long, beadlike mass. The sight of the eggs stimulates the male to emit sperm and externally fertilize the eggs, a process unique among salamanders. No courtship ritual precedes the act and the

female leaves as soon as her role is fulfilled.

For the eight to ten weeks that it takes the eggs to hatch the male guards them and keeps them in a mild turmoil. Instinctively he drives away intruders. Yet while on guard he will sample the eggs himself.

By November the eggs hatch and the inch long larvae emerge. Those not preyed upon by fish double their size within a year. By this time the limbs are developed and long feathery gills have formed. Maturity is not reached until the fifth season although the hellbender will continue to grow for many years. One captive hellbender lived for 29 years in a zoo aquarium and had reached a length of 27 inches.

With maturity the gills are lost and the hellbender must draw its oxygen through the slimy skin and from the lungs which have replaced the gills. The lungs enable it to live out of the water for a short period. Hellbenders held captive in an unaerated aquarium frequently come to the surface to gulp air.

The hellbender is the largest salamander in the United States. The female typically outgrows the male. Worldwide it is dwarfed only by the giant salamanders of the Orient which attain lengths of over five feet.

The *mudpuppy*, another large aquatic salamander found in Pennsylvania, is often mistaken for the hellbender. It's smooth skin, red gills and smaller size set it apart from its wrinkled cousin quite readily.

If you should happen to tie into Mr. Wrinkles while catfishing, at least boat him or snap a picture before returning him to his watery home. The experience plus his portrait should make for some interesting conversation.

The eyes of the hellbender seem out of proportion to the size of its body.





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PENNSYLVANIA

SEPTEMBER, 1972

Angler

the
Keystone State's
Official
FISHING · BOATING
Magazine...

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Single Copy



Why Bother ???

The organized sportsmen of Pennsylvania have been the voices for conservation of our natural resources for years. They have led the fight in the Clean Streams Laws, the Strip Mine Laws and have been the strong force that has enabled Pennsylvania's Fish Commission and Game Commission to maintain separate identities and independence from interference from political sources. Long before the "Ecology Kick," the sportsmen were like voices crying out in the wilderness, they were our conservation conscience, rallying the other citizenry to the cause while the big clock on the wall ticked off the wasted hours. It now seems that many eco-faddists have suddenly come alive, many of them becoming instantly unpopular by saying, "Why haven't you done something?"

At any rate, the organized sportsmen represented by the Pennsylvania Federation of Sportsmen's Clubs have, through enlightened leadership, maintained the strongest stand against further rape and misuse of our resources and have backed the Fish and Game Commissions in a spirit and manner unique to Pennsylvania.

A good example of their effectiveness has been given to us in the story of Lake Erie, and this issue of the ANGLER begins a series on the Lake and helps to unravel the confusing stories that have been told about the Lake.

One of the original weapons of the alarmed conservationists was to make a lot of noise about the problem (sometimes giving the adverse viewpoints or emphasis to get the attention of the public so that the General Assembly and the implementing agencies could act). Lake Erie was depicted as a "dead lake" in Look Magazine and several TV series, and although this rallied a number of people to the cause, it also had a bad effect. While sewage treatment, industrial waste treatment, and proper land use were positive results of the spectacles, the "dead lake" philosophy spawned a feeling of lethargy to the point where a number of people said, "Why bother?"

The sportsmen, the citizens of Erie and the Pennsylvania Fish Commission believe that it is worth bothering about. The Fish Commission has invested already, and encumbered for the future millions of dollars in bond issue moneys, etc., for improvements, salmon and trout holding facilities, boating accesses and other facilities for the sportsmen and the general public—and we surely would not be doing this if we believed that the lake was dead!

Read Roger Kenyon's article in this issue (he'll have more in future issues) and the Cooperative Nursery Special and you will readily see that except for the sick portion of the Lake west of us, Lake Erie still has some of the qualities of a pristine body of water that needs help not only to save that part of it . . . but to restore the balance of the Lake to the kind of water that the citizens of the United States need and deserve.



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STATEWIDE with the EDITOR

ON THE COVER, from an Ektachrome by the Editor, we feature the unidentified angler we spoke about in this column in our May issue. Lake Erie was just too rough for boat fishermen, but this man had come to fish and set about to do just that.

ON THE BACK COVER, that youngster in deep thought is eight year old Marshall Goldberg, son of Gerald H. Goldberg, a member of the Environmental Hearing Board.

In all probability, fishermen and tourists alike have been confused with the pronouncement "Lake Erie Is Dead," which made headlines some time ago, and with this issue we're going to begin to set a few things straight. Biologist ROGER KENYON has been taking a long hard look at the situation and gives ANGLER readers a factual report on what *actually* is taking place at Lake Erie. His account, "Lake Erie—CHANGING . . . not dying," on page 6 will hopefully clear up some of the existing confusion and more on Lake Erie will be forthcoming in future issues of the ANGLER.

"It's about time we let the public know that certainly for the Pennsylvania portion, even with its problems, there is a lot of good left in the old lake and we have enough confidence in it to put our money where our mouth is!" says Director Abele. "The whole program of renovating and restoring Lake Erie water quality would go down the drain if enough people thought it were dead and not worth doing anything about."

SPORTSMEN'S CLUBS differ from most other clubs in that not too many have gone down the social path of "eat, drink and be merry" only. Our Co-operative Nurseries are an outstanding example of organized sportsmen in action. Too often, unfortunately,

NATIONAL HUNTING and FISHING DAY September 23, 1972

their sponsors, as well as the hundreds of other sportsmen's organizations scattered throughout the commonwealth never get the credit due them for their work in conservation. It's time to change all that.

NATIONAL HUNTING AND FISHING DAY (Saturday, September 23, 1972) officially recognizes the roll of America's sportsmen in conservation and outdoor recreation.

You and your club are invited to take the leadership in your community with an OPEN HOUSE which

will show your friends and neighbors what sportsmen are doing for conservation . . . and have done in the past 70 years!

No one can do more for conservation than you, working in your own community on a friendly person-to-person basis with your neighbors and business associates. OPEN HOUSE is the perfect way to show your friends that Pennsylvania Sportsmen are the best friends fish and wildlife ever had.

Your club facilities can be adapted for conservation displays and exhibits. Need help? Call your District Waterways Patrolman—he's prepared to show slides, speak, lead a clean-up campaign or perhaps provide literature for your displays. Don't miss a golden opportunity to let your community know what you're doing—they may want to help.

Those were the days! The sturgeon in the photo below was taken in a fish box at Newport, on the Juniata River, in 1906. It was reported to have weighed 96 pounds. There are few folks alive today who remember the occasion but one of them is Mr. George Bitting of Millerstown who told the Editor all about, "When The Shad Ran The Juniata," on page 16.





FISHING OUTLOOK

By-- Stan Paulakovich

The North Branch of the mighty Susquehanna, the "long reach" river, starts its meanderings in New York state. It crosses over into Pennsylvania then back into New York and back again into the Keystone state at Sayre, Pa. From here, twisting, turning and picking up water from many tributary streams, it finally empties into the Chesapeake Bay.

That section which winds through Bradford County, 46 miles of it, is the subject of this month's article. "Bucky" Persun, Waterways Patrolman for this district, says of the area, "Twenty years ago, when I first started here, there were more fishermen on weekdays than we have now on weekends. Fishermen from the Scranton, Wilkes-Barre and Williamsport area who fished here then have taken to fishing new water areas closer to home. So that today, this section is under fished."

The Susquehanna in Bradford County is largely wild, woolly and, to a great degree, inaccessible. It is not prime pleasure boating water. Although there are several 3 and 4 mile long pools where water skiing and cruising can be done, it is basically a fishing river in Bradford County. Twelve and fourteen foot john boats, skiffs and row boats lend themselves beautifully to this stretch.

Fishing for smallmouth bass and walleyes during June, July and August here is just "so-so." In September, as the air and the waters begin to cool, fishing starts to pick up. After the first couple of frosts hit the area, the action really begins. Fishermen who fish during the summer months can't believe their eyes when they see pictures of stringers of huge smallmouth, walleye and muskies taken from the river during Fall.

At this time of the year, and in fact all year long, fishermen on this part of the river use live bait. A great many anglers prefer helgrammites. These normally don't pick up walleye though. Others use crayfish, either the soft or the hard shells with main claws removed and some use minnows or nightcrawlers. Spinners or

lures will occasionally catch a few fish, but none of these can come close to the productivity of the prime bait in the area—the stone catfish.

A long time ago, when the fame of the stone catty as a fish-getting bait became known, some ingenious angler devised a simple method of getting them from the river. Called a "Bull Head Scoop," it is constructed of wire mesh and slats in a box-like affair with handles. Irma and Steve Strickland who live along the river at East Towanda are both dedicated Stone Catty enthusiasts for smallmouth bass. The scoop is pushed upstream close to the bottom (as "Buck" Persun demonstrates in the photo) in



the riffles where the "blue eyes" are hiding under the stones. The current sweeps them into the funnel-like mouth of the scoop. They are carried over a built in ledge in the scoop and are trapped underneath.

Old timers used to be able to reach down in the water and very gently raise a stone from the bottom and capture by hand, the stone cattys hiding beneath. There was no need to carry a bait bucket—when you needed one, just reach down and get it. There are not too many of these fellows around anymore! Fishermen who pick "blue eyes" during daylight hours use another method. They take

a black silk or nylon stocking and cut off the top 12 inches or so. A wire loop is made from a coat hanger and bent into a six inch circle. The mouth of the stocking is woven or tied on to this ring, (similar to a little dip net,) and the other end is tied shut. This net is held downstream, on the bottom, just below a stone where a catty is thought to be hiding. When the stone is lifted, the catty seeking the shelter of the darkness provided by the net, swims into it. Up to three inches long is an ideal size stone catty. They are hooked through both lips when fishing with a bobber or while casting and retrieving.

Fishing this part of the Susquehanna this fall, concentrate on the deeper holes, some of these will run 15 feet deep. The gamefish have long since departed the flats and shallows and are congregated in the deeper pools—or at the head of them.

Starting in the upper reaches, let's look at some of the favorite holes and access areas down through this stretch. The Pennsylvania Fish Commission access area at Sayre has a respectable sized pool with good depth, a favorite walleye hole for many. Downstream four miles the Chemung river flows into the Susquehanna and this is a great Smallmouth river. There is a dirt road ramp at Tozers bridge on the Chemung below Sayre where you can put a boat in. During September most of the riffles in the river will be shallow and it might mean some pushing to get down. The pool one mile above the Chemung confluence on the main river is a favorite fall fishing spot with a good length of deep water. At Tioga Point, just below the Chemung, is another long deep hole. Next area downstream is Slope Wall, just below Athens. Ulster Bridge, downstream, has a town access ramp and can be the start of a good float trip, down to the Hornbrook access, three miles away. The next good spot below is in an area called "The Frozen Banks." Then at the mouth of Sugar Creek, which is known locally as "Squaw

continued on page 32



OUR KIND OF ANGLER!

I have enjoyed fishing in Pennsylvania since I was 10 years old and now am 44 and fish approximately 12 hours per week from April to November. Please renew my subscription for another three years of enjoyable reading.

My boys, Kevin and Billy, go with me much of the time. I know they will grow up to be good sportsmen and fishermen. I love to teach them of the great pleasure of fishing. P. S. If the price of a license was \$100.00 it would not be too much for the pleasure I get from fishing.

WILLIAM R. MARCH, Jr.,
Dillsburg, Pa.

LAKE ERIE BUFF

Ed. note: The following letter was received by Norman E. Ely, Waterways Safety Coordinator, Lake Erie District. His reply follows.

"I know that you are quite busy, and have to cover a lot of area, but I was hoping that you could help me. I like to get away on a weekend fishing trip about once a month during the summer. Since the mercury scare and such at Lake Erie, we have been going to Pymatuning. The fishing there is okay, I guess, but not really to my liking. I like to eat the fish I catch, and so does my family. We enjoy having fish fries, but we have not had many since Lake Erie was closed.

"My wife has just taken up the sport and is beginning to enjoy the outdoors. I would like to take her where I have known very good fishing, but I don't want to go unless one can keep and eat the fish one catches. This brings us to the point of this letter. I have read in the newspaper where commercial fishing for bass 9 inches and under is permitted, but nothing was said about the pleasure fishing. I would appreciate the answers to the following questions if you please. Are the perch any good to keep and eat? Are the bigger bass

good if not taken in quantity? My family and I have enjoyed many, many good fishing trips up there, and we are anxious to go again. We have tried to find out if the fish were good, but nobody we talked to could give us a satisfying answer. This is why I decided to write to you. I hope this letter does not take up too much of your time."

THOMAS KALKA, Pittsburgh

Dear Mr. Kalka:

Thanks for your letter of May 23 expressing your concern about what has been written and said about Lake Erie's fish life and pollution.

The minute mercury content of Lake Erie's fish should not be considered unless one's diet consists of *4 pounds of fish per day for a year*. Then there would be a chance that the body would retain an excess of mercury in the body cells.

Mercury research in America is a very new research program but in Japan there have been casualties resulting from over-contamination of fish. This occurred on a Bay area where the persons contaminated lived aboard small boats and their diet consisted of 90% fish. The *parts per million* found in the fish was 50 times greater than the mercury content found in fish in Lake Erie. This mercury contamination was from a discharge from a plastic plant going directly into this bay.

The human body is believed to digest *one-half parts per million* of mercury in a 24 hour period without retaining mercury in the cells. A great deal of research is needed before conclusions can be reached on mercury found in fish. Far greater amounts of mercury are found in medicines prescribed by doctors for certain patients. It is my opinion that the mercury scare of fish life in Lake Erie was not well founded.

Bass are game fish and in Lake Erie cannot be taken or sold by commercial fishermen. The only fish permitted to be taken by commercial means are the food fish—perch, walleye, smelt, catfish, burbot, suckers, etc. Game fish are northern pike, muskellunge, bass, salmon and rainbow trout in Lake Erie waters. So, another newspaper article was not factual.

In conclusion, Lake Erie is a very productive body of water for fish life and a great many man hours of recreation are derived from this body of water as well as an eatable prod-

uct which nature and man have provided. I want to extend an invitation to you and your family to enjoy Lake Erie's fishing without fear of mercury contamination. Recently I checked a fisherman from Pittsburgh fishing on Presque Isle Bay. He held up a nice catch of perch and his remarks were "if this is a sample of Lake Erie pollution—I like it."

NORMAN E. ELY
Waterways Safety Coord.
Lake Erie District

WELL ROUNDED?

This is truly a fine magazine. Very informative. I enjoy the letters, especially those that try to reserve the lakes and streams for themselves. Gripes about boats—children taking our hard earned trout—"out of staters" catching the big ones. This magazine has taught me about littering—helped with tying flies—informed me about lakes and streams—all in all the best magazine for the fisherman in the state.

Enclosed my renewal for three years. Congratulations—a job well done—or being done well.

HARLAN P. THOMES, Beaver, Pa.

Thanks Harlan, we hoped you'd see it that way!
Ed.

BOATING BOOSTER

Enclosed please find \$5.00 for 3-year renewal of the Angler.

I have read many letters in this magazine, both pro and con, on boating articles. I do not own a boat at this time, but I still read it from cover to cover, and enjoy it very much.

As I hope to buy a boat in the near future, I find these articles very interesting, and the information in them is sure to be of some use to me.

Thank you for a very fine fishing and boating magazine.

JOSEPH F. TERSAK, Pittsburgh, Pa.

ALLEGHENY CANOEING

I never miss reading Capt. Ross' "Boating" page in the Angler and have learned a lot from it. One of my main interests is canoeing and kayaking so I noted with interest the question from "E.T.C." of Allison Park in the February, 1972 issue about canoeing the Allegheny.

Capt. Jack was correct as usual. It is about 99 miles from Warren to Emlenton (106 from Kinzua Dam to Emlenton) and five days is about

right. The going can be kind'a rough in the afternoon when the wind blows hardest from the south-west and tends to blow you back up the river, but all and all it's a beautiful ride.

Capt. Jack mentioned walking the canoe over the riffles. This was so before Kinzua Dam, but now the dam keeps a pretty steady flow up all summer and on all the trips we have taken alone or with the Allegheny Canoe Club, we have never had to walk a single riffle.

Most of the trip and some other streams in the area are written up real well in "Canoeing in Kinzua Country" available for a buck from Allegheny Outfitters, Box 211, Clarendon, Pa. 16313.

Geological Survey Topographic maps are canoeist "road maps" and thirteen excellent 7½' maps cover the 100 mile trip. They are: Clarendon, Warren, Youngsville, Cobham, Tidioute, West Hickory, Tionesta, President, Oil City, Franklin, Kennerdell, Eau Claire, and Emlenton. Two of them, Youngsville, 1969 and Tionesta, 1968 are hot off the presses.

One further word of caution. A great deal of the Allegheny shoreline and many of the islands are privately owned. Be sure you are on public land or have the owner's permission before camping or stopping. The Western Pennsylvania Conservancy and the Bureau of State Parks are considering making park areas around the Tidioute and Kennerdell areas but this is in the future. Meanwhile check carefully. One of our favorite spots is Hemlock Island about a mile north of East Hickory. There are many others including several good private campgrounds. Happy canoeing!

E. K. HOLLOWAY
Rep., Shenango Valley Canoe Club

QUIET PLEASE!

I have a gripe which I suppose isn't uncommon to you people.

Last weekend I went up to Hammersley Fork Stream in Clinton and Potter Co. I haven't been there for some time. What I saw I was amazed at. Also, Executive Director Ralph W. Abele said you are officially designating 75 streams as a Wilderness Trout Stream Management Program.

Now back to my story. If you look at a map you will see the stream is made up of Hammersley Fork, Nelson and Bell Branch. Along Bell's branch there is a trail to the top of the mountain to Montour road.

While fishing there last weekend at least 30 to 35 motor bikes used this trail and there never seemed to be any silence! There was always someone riding one of these "things" somewhere. I believe that to go into a wilderness area one should have to walk or *stay out!*

Also up Hammersleys Fork Branch there is now a jeep road where the jeeps go over the ground around logs and through the creek up to almost Cow run.

This is one of the largest streams in central Pennsylvania that for years had been a wilderness area. And as you may know in past years had always been an excellent brook trout stream.

My gripe is, why must this place be ruined by someone who doesn't want to walk in and fish in solitude? Motor bikes and jeep trails everywhere . . . beer cans, pop cans in the stream!

This place should be restored to the way it always has been—with *fly fishing only* added. I saw a dozen small brook trout lying dead in the stream along with the cans and junk that people bring in and throw away.

I think this is one stream that should be a *walk-in* stream to fish. Maybe this would keep out the junk. Also I believe this is state owned ground. Isn't there a law forbidding these bikes etc., from using these trails?

H. DONALD LARSON, Altoona

Dear Mr. Larson:

I'm not sure we need to impose a fly fishing restriction on the upper section of Hammersley Fork as you suggest; other than that I am in agreement with your complaint. It seems we are going through an era in which people equate recreation with a high decibel rating and a cloud of dust. There is, among this crowd, a very limited appreciation of solitude or of walking a long distance just to fish.

One of the real problems in preserving a wilderness setting is that there has developed, among many people, a tendency to label anyone who doesn't want to open up every inch of the continent to the masses a "preservationist." Their "knee jerk" response to any suggestion to preserve anything by limiting access is to claim that a wilderness serves no beneficial purpose if no one enjoys it save a few hardy, healthy, well conditioned individuals who will walk in to enjoy it. The concept here is

that we should strive for the greatest recreational benefit through maximum utilization not preservation. To this I would respond that a wilderness atmosphere is a bit like innocence, you mess around with it and you lose it.

What we are dealing with is two essentially different philosophies of recreation and two incompatible forms of recreation. The only solution I can see to this dilemma is to restrict the use of motor vehicles in those remaining areas where there is a wild trout population in a wilderness setting of fine aesthetic appeal. This is in essence what the Pennsylvania Fish Commission is striving for with the Wilderness Trout Streams Program. We welcome your support for this program and hope we will have the support of all anglers who share your appreciation of the values of a quiet scenic place to fish and who are willing to walk a few miles for this type of angling.

I cannot comment on the legality of operating vehicles on state-owned land in the Hammersley Fork area. I'm sure if you write to the state agency which controls the land in question they could advise you of the legal aspects of riding motorcycles and trailbikes on this land. Others have suggested the Hammersley Fork watershed as a prime candidate for a wilderness area and our biologists were investigating the area this summer.

You were correct when you mentioned that people with a gripe are not uncommon to a conservation agency. If all gripes were as consistent with my own feelings as yours, I would welcome them. The more people that complain about mechanized intrusions into the last vestiges of any type of wild area we have in Pennsylvania, the more likely it is that the general public will realize how much we have to lose and how rapidly we are losing it.

DELANO R. GRAFF
Asst. Chief,
Division of Fisheries

JUNIOR CITATION WINNER

Please send me a Citation application. I am 15 and I caught a 14-inch crappie bass on a perch flatfish at Deer Lakes Park, Russellton, Pa.

I enjoy your magazine very much and I find many interesting tips, articles, fly tying, etc. The Pennsylvania Angler is really a great magazine. Thank you very much.

DOUG WELTY, Cheswick



What about the future of sportfishing at Lake Erie? Will fishing, like this Coho Salmon catch, be but a memory for this youngster in the years ahead? We hope not . . . we think not!

The fantastic growth rate of the Coho is a definite indication of an abundance of live forage available to the lake's gamefish populations. Released as young smolts weighing "three-to-a-pound," the adults return in 18 months weighing up to 8 pounds or more.

Cleveland Ulmer of Erie, who holds the coho he caught last year, would be difficult to convince that Lake Erie was "dead."



LAKE ERIE . . .

by Roger Kenyon,
Aquatic Biologist

Lake Erie Research Branch

PART I

For many, Lake Erie has come to represent the best example of a deteriorating environment. More emphatically it has also been appraised as "dead". The latter being an unfortunate and inappropriate reference while the former may retain some validity.

The label "dead" sustains a sense of *hopelessness*; a terminal, abiotic and, irreversible state. NOTHING COULD BE MORE REMOTE FROM THE TRUTH! With this and forthcoming articles, we will attempt to dispel this misconception of Lake Erie and bring forth some of the findings of the Fish Commission and other research agencies working the Lake. The changes in the Lake ecosystem will be explored along with the ramifications upon the fish and fisheries. Lastly, we will confront ourselves with the future of Lake Erie and the options for restoration.

In short, the association of the adjective "dead" with the status of Lake Erie bears little resemblance to the actual problems and changes this large body of water is undergoing and does little to promote the required measures for basin wide restoration. It only distracts one from making prudent and thoughtful judgements regarding realistic courses of action and effective programs.

If the Lake is not dead, just what is the situation? Perhaps it is best to first consider the well documented, historical changes in the physical and chemical components of Lake Erie and then proceed to examine the resultant effects upon the entire ecosystem.

Lake Erie is the oldest (12-13000 years) of the five Great Lakes and also the shallowest. Both these factors apparently are keys to the processes which have been instrumental in accelerating the rate of eutrophication of Lake Erie. The limnologist defines eutrophication as the geological and biological process which matures a lake from a young, cold, clear, deep,

CHANGING . . . *but not dying!*



The spectacular leaps of the coho salmon, ascending the many small waterfalls on Erie's tributary streams, are an annual delight for thousands of spectators.

relatively unproductive body of water to a warm, shallow, productive and biologically rich environment, both in variety of forms and abundance of organisms. If this process is permitted to continue, the Lake eventually will acquire its senescent form—a marsh, swamp or even disappear entirely. The maturation of a lake is a complex process, requiring a span of geologic time and, with or without the presence of man, is a natural phenomenon. Urbanization and agriculture has the profound ability to accelerate the process of eutrophication often advancing the state of maturation of a body of fresh water many thousands of years within a few decades. Industrial and municipal wastes and intensive agricultural applications upon the Lake watershed enrich the waters, promoting a biological enriched environment.

Probably because Lake Erie is a massive body of water its deterioration has been so intensively focused upon. Traditionally it has been considered that large lakes are immune to the effects of rapid eutrophication because of their capacities to dilute all that is wasted into their volume. Lake Erie has not reflected this traditional concept. We shall elaborate upon this as it pertains to the unique situation of Lake Erie, presently unique among the Great Lakes themselves.

The Lake itself can be divided into three distinct geographical basins. Their biological features and differences are manifested by the differences in their geophysical features. The western basin is shallow with most of its bottom sediments composed of either muck or gravel-rubble deposits and shoals with limestone bedrock strata exposed in areas. The central basin is somewhat deeper (averaging about 70 feet in depth) but without shoals or irregularities on its flat, plain-like substrate of clay and mud. The eastern basin is the deepest with a maximum depth of 210 feet with a characteristically sloping floor extending towards the maximum sounding several miles east of Long Point, Ontario. The bottom substrates are composed of sand, mud, gravel and shale bedrock or mixtures of clay, sand and gravel. A large submerged sand bar divides the central and eastern basins. As we will observe, these differences have a dramatic control over the biology and state of eutrophication within the Lake.

Eutrophication has made the most dramatic advances in the western basin. The initially shallow basin was subjected to further filling during the late

1800's and early 1900's due to the rapid conversion (and subsequent erosion) of the Maumee River Watershed to intensive farming. Increased shoreline erosion has further burdened this and other areas of the Lake bottom with increased sediments. In most instances these sediments carry increased nutrients in the form of organic compounds and the various elements of the processes of biotic production and food chain development. Almost a century of intensive agriculture and increased urbanization in the western Lake Erie watershed has been responsible for the depositing of excessive amounts of sediments, organic deposits and solids as well as the nutritive elements—the phosphates and nitrates. The rates of sedimentation have been less in the central basin and retarded in the eastern basin of the Lake.

PHOSPHATES

Among the chemical constituents dissolved or suspended within the ecosystem, phosphorous may prove to be one of the most important despite the fact that it is one of the least abundant in the Lake.

Phosphorous, as an element, is a necessary factor in the production of green plants which include rooted aquatics as well as phytoplankton and attached forms of algae. It is often considered by biologists to be a limiting factor because of its low concentration (often only trace) in the water and bottom sediments. Algal and aquatic plant production then is often limited by the concentration of available phosphorous.

The effect of increased algal and rooted plant production has been dramatic in its influence in promoting the rapid aging of Lake Erie, particularly in the western and central basins. Not only has this increased productivity altered the food chains and dominance of several invertebrate and vertebrate organisms, but has caused rapid and severe changes in the chemical composition of these waters, especially with reference to dissolved oxygen and other gases. Algal growths in the western basin have become so severely accelerated that noxious blooms of the blue-green algae, *Aphanizomenon*, *Anabaena* and *Micro*

continued on next page

LAKE ERIE—

CHANGING . . . but not dying!

continued from preceding page

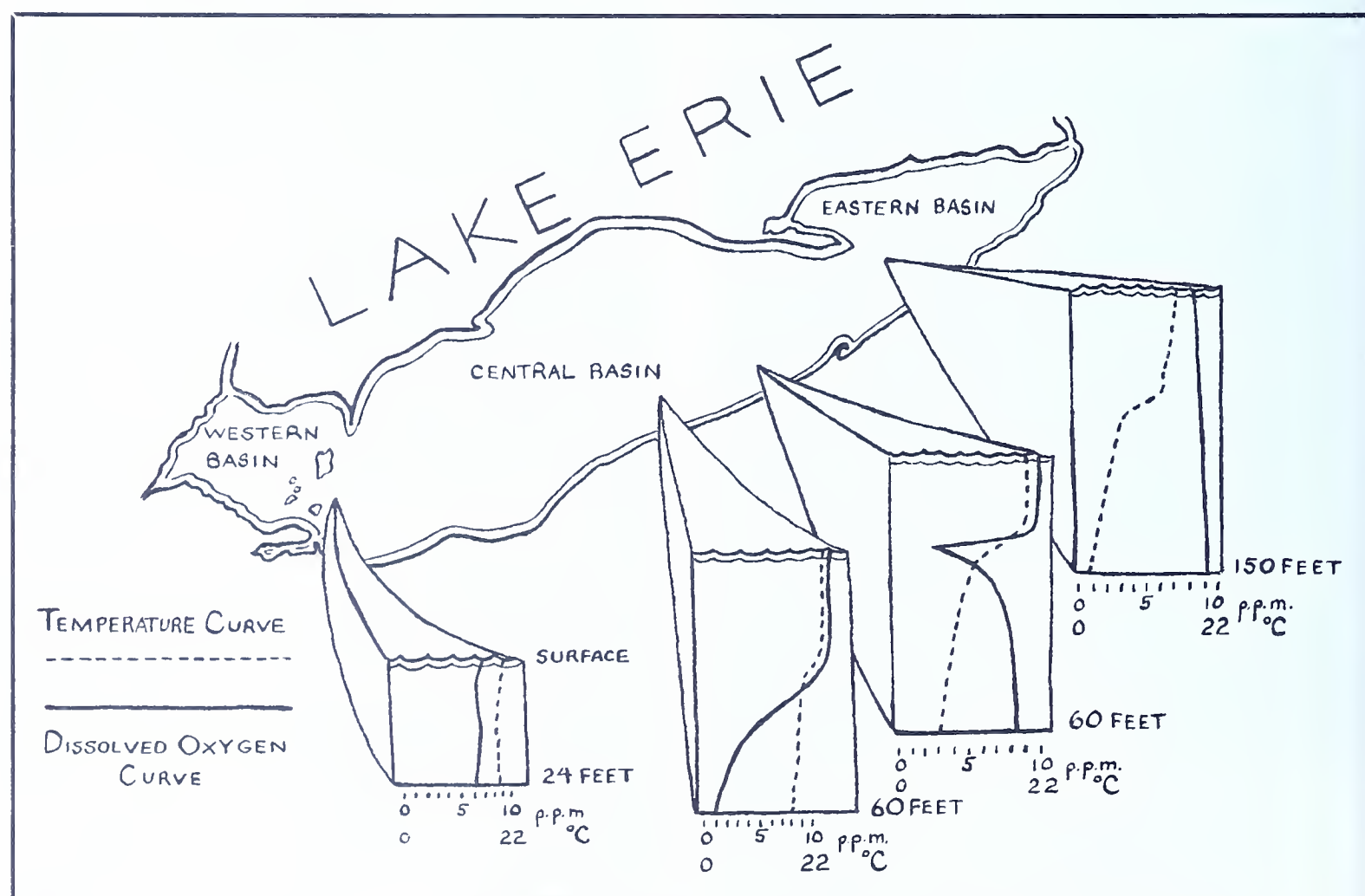
cystis and excessive growths of the attached algal form *Cladophora* cause malodorous and otherwise obnoxious problems when these growths begin to decay in the shallow bays around islands and along the shore. Upon sinking in deeper waters, however, these masses and growths of algae will, under certain circumstances, consume oxygen in the water to the point of depleting the bottom water's oxygen supply entirely. The majority of these affects have been restricted to the central basin and irregularly occur in the western basin.

The source of this increased productivity has been related in part to increased phosphate concentrations since the 1920's when phosphates were beginning to be monitored. It is during this period that other indices of water chemistry change were also observed. Sulphate, chlorides, sodium and potassium, total dissolved solids and calcium concentrations showed relatively rapid increases in concentration. These changes in the chemical characteristics of lake water were a direct response of increased urbanization and

industrial growth within the Lake Erie watershed. These changes are indicators of increased enrichment, in the general sense, inasmuch as they are often constituents of the wastes of a modern, populated, industrialized society—the major stimulant to rapid eutrophication.

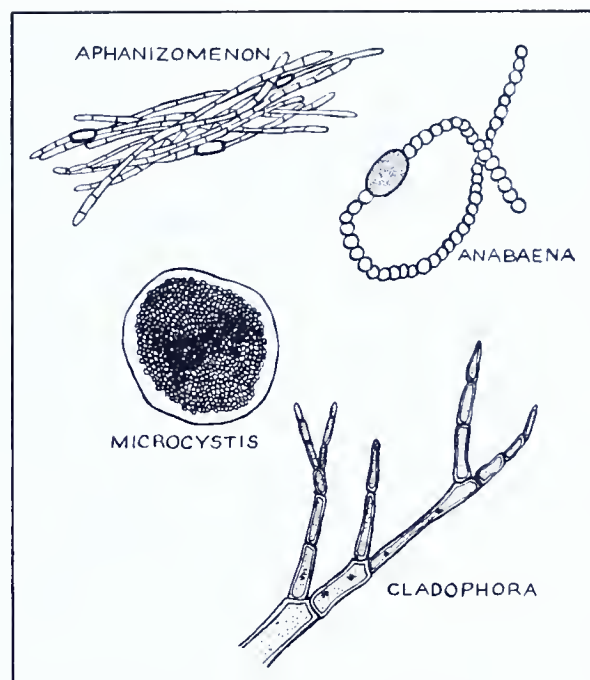
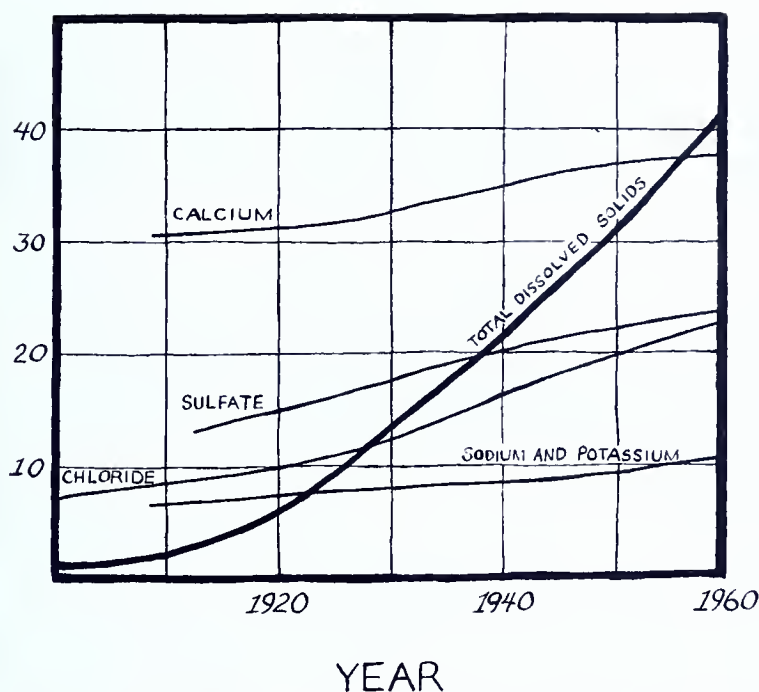
TEMPERATURE AND DISSOLVED OXYGEN

Although the mean annual temperature of Lake Erie has been elevated 2° F since the early 1900's this trend has followed that of the climate and is not necessarily a consequence of increased eutrophication. However, temperature has a marked influence concurrent with increased oxygen demand of the water and sediments of the western and central basins. When large areas of the central basin attain thermal stratification during late summer, the upper water strata (*epilimnion*) and the bottom water strata (*hypolimnion*) are maintained as separate layers whose waters never mix during this period of stratification. Long periods of stratification permit the oxygen demanding bottom sediments to deplete the hypolimnion of its life giving oxygen. The consequences to fish and aquatic life are notorious and will be discussed further in later articles. It should be noted that this situation is not often attained, for-



Profiles of the water column from the three basins of Lake Erie depict the concentrations of oxygen at various depths during the first week of September. The effects of thermal stratification are different for each basin and likewise the result effects upon dissolved oxygen in the bottom waters. Two columns in the central basin indicate the transition from the western basin to the eastern basin—"a separate lake."

CONCENTRATION (PARTS PER MILLION)



Above, left. Increases in the various chemical constituents of Lake Erie are indicative of the advancing state of eutrophication and biological productivity. Above, right. These are representatives of green and blue-green algae (magnified 600 times) that have been increasing in abundance in response to the increase in nutrients in Lake Erie. The decomposition of large masses of these forms causes severe oxygen depressions in the central basin, but have also been responsible for expanding food chains in the ecosystem.

fortunately, in the western basin as one might expect; winds and currents act in this shallow area to discourage thermal stratification and the mixing and exposure of bottom waters to the atmosphere permits regeneration of oxygen to the basin's water system.

Within the eastern basin water column, thermal stratification is also observed. However, dissolved oxygen depressions on the order of the severity noted in other areas of the Lake have not been documented. The first reason is due to the fact that the sediments of the eastern basin have not been altered to the extent that they consume oxygen at the same rate as sediments of other areas of the Lake. The accelerating growths of plankton and algae have not approached the rates of the western basin, organic enrichment from wastes from urban areas has not been as severe, water temperatures are cooler and shallow water zones of decomposition which stimulates oxygen consumption are not as extensive as in other areas of Lake Erie. Although phosphates are abundant for the organisms of production in all basins of the Lake, they are thought to be reduced in *availability* in eastern waters because they may be trapped in the substrates and insoluble. This entrapment is the result of a low rate of liberation of phosphorous to the water column. The constantly high concentrations of oxygen, which oxidizes available phosphorous, causes

it to become relatively insoluble. Insofar as we have observed, the eastern basin has not manifested the characteristics of eutrophication in as full measure as the western and central basins. In a manner of speaking, the eastern basin could be considered a "separate lake"—presently without the troubles of the other basins of Lake Erie.

We have simplified the complex chemical and physical changes experienced by Lake Erie for the purpose of ready explanation. The changes have been correlated with increased fertility and aging which has been the cause of increased biological productivity. The problems evolving from a productive aquatic ecosystem have given the impression of a dying lake when, in fact, life in Lake Erie has never been so extensive in variety and abundance. Many forms of fish and aquatic life have been replaced by others. The earlier disappearance of several species has given space and energy for the production of different species. The increased enrichment has expanded the scope of many food chains, permitting the increased abundance of many forms of fish life. The Lake is by no means dying.

This will become more obvious after a historical look at Lake Erie's fish populations in the next article on this subject in the November issue of the Angler.

**NEXT
MONTH**

*Don Neal tells us all about,
"THAT COHO CRAZE."
Jim and Sylvia Bashline show how to,
"FILLET THOSE COHO."*

MILL CREEK LAKE

a new lake for Pennsylvania's Anglers and Boaters

by John I. Thompson

Contract Administrator

On a bright June morning last year in the picturesque, hilly, farm-studded valley between Lycoming County's Mill Creek and Baty's Mountains, the Pennsylvania Fish Commission started construction of another lake for Pennsylvania and visiting sportsmen. The Commission's Chief Engineer, Will Hobbs, and veteran dam expert Roy Frank, along with two of his team, designer Ken Hoy, and Luke Fisher (who would be the Resident Inspector on the job,) conducted an Initial Job Conference. Partly introductory in function, it was the first meeting between the construction contractor and themselves. The scene was a farm lane cutting across the end of a pastured hill. Unrolled across a dusty car hood was a thick set of plans. Its details, construction methods to be used, and paper work procedures were the subject. Also settled were the matters such as the scheduling of regular meetings during construction, Inspector's

office, installation of telephone service, and the location of pertinent elevation and boundary stakes.

Much of the project area could be seen from the hill. A scattering of overgrown stone piles, the remains of foundations, marked where houses and other buildings had stood long ago. One, obviously from its size, had supported a large, heavy structure. It was downhill from the gathering and along the edge of a narrow meadow. A few yards from it, in the middle of the meadow, quietly flowed a creek which emerged from a large brush-covered marsh. Once before, part of this low-lying 400 acre area had been flooded. During the lumbering era, in the last century, it had served a steam-driven saw mill operated by a man named Lippincott. Much of the remains of the stone dam he built are still standing. They are only a short distance downstream from the Commission's new dam. The foundations in the



"... in the middle of the meadow, quietly flowed a creek which emerged from a large brush-covered marsh. Once before, part of this low-lying 400 acre area had been flooded."

Aerial photo shows some of the area to be flooded. Mill Creek stands out as a dark meandering line entering the photo from the right; spillway is to the lower right of center. Typical rolling farmland of Lycoming County surrounds the new lake.

Vannucci Photo.



meadow are the remains of the saw mill. It is probably safe to conjecture that it was from this mill the stream derived the name "Mill Creek."

The plans the engineers had gone over together that morning presented a picture of the new lake and its public-use facilities. They also represented four years of work up to that time by the Commission. Beginning in 1967 with Commonwealth Project 70 Land Acquisition and Borrowing Act funds, its biologists, surveyors, engineers, and real estate specialists had made the necessary feasibility studies and property negotiations. A total of 676 acres, costing \$243,000, was purchased, ensuring protection of the watershed. Then, in 1969, the personnel of the Commission's Division of Engineering undertook the preparation of the design specifications and drawings for the project. The final development phase utilizes Commonwealth Land and Water Conservation and Reclamation Act, "Project 500", and matching Federal funds from the Bureau of Outdoor Recreation. Early in June of 1971, an award was made through public bidding processes of a \$659,000 contract to the Giffin Construction Company of LeRaysville, Pennsylvania. Construction began on the twenty-fifth of that month with the holding of the Initial Job Conference. Target date for completion is September 30, 1972.

The main feature in this new Commission project is the 550-foot long embankment containing 21,000 cubic yards of earth. Situated between two low hills, the northern end covers the site of the old saw mill. The eastern, up-stream side is faced with stone riprap—the lower with sod. At the southern end, the hillside is excavated to make room for a concrete spillway. In the center, directly over the original creek bed, the breast is 25 feet high. Located there too is the

rectangular concrete tower containing a stop-log and valve system for controlling the depth and flow of the impounded water.

Under normal conditions the lake will cover 389 acres to an average depth of ten feet. At flood stage the spillway limits expansion to a maximum 441 acres. The shoreline is irregular, consisting of one small bay and six coves. The northernmost is cut by a causeway bearing Gamble Township's Road No. 846. Between it and the mouth of the bay at the south end of the lake lies a 7,000 foot course which, under steady cross winds, will be a long fast reach.

The visitor will find three access areas available for his use. Each has a large paved parking lot and boat launching ramp, mooring cable, boat dock, and rest-room facilities. One access is located at the north end of the lake by the causeway. The second is at the south end, off Township Road No. 691. The third is along the southeastern side, and also on Township Road No. 846. Trout Run, which is north of Williamsport on Route 14, is four miles due west of the lake, and Warrensville, five miles southeast.

Manually operated, electric powered, and sail boats will be welcome. The latter, as on all Commission lakes, will be limited to a length not exceeding 14 feet. The rate of "turn-over" of the lake's water is controlled to create conditions ideal for fish life. Although swimming is prohibited, the angler and boater can look forward to many happy hours. They can anticipate Muskies, Northern Pike, Largemouth Bass, Channel Catfish, Black Crappies, and possibly Red Eared Sunfish. In three or four years, when these fish are ready to be caught, it will all add up to another great place to go for outdoor recreation in Pennsylvania.

The Amateur

T A X I D E R M I S T

Many of the trophy fish landed each year in Pennsylvania never reach that place of distinction rightfully reserved for them above the mantle . . . entirely too many anglers don't care to invest in a professional mount. Why not try one of your own?

by Bob Kopta,

Special Waterways Patrolman

Featuring the skills of

Bob Snyder,

Special Waterways Patrolman

The next time you catch a good size fish—or even a small one as I often do, why not mount it? It's not really hard but it takes time and patience, as Special Waterways Patrolman Bob Snyder, who does a lot of fishing throughout the state, found out. It all started like this.

One Saturday last spring, Bob and I stopped at Northway Safari in Wexford, Pa., which is operated by Joe Howe and Rich Nussbaumer, well known taxidermists. While there, we were invited to the back room where Joe and Rich were "performing the art." When Bob and I were heading home that evening Bob said he thought he could mount a fish and he did just that! Bob had some trout in the freezer to start his venture.

The first step was to skin the fish and scrape all the meat from the skin. You have to get all the meat and bones out of the skin and it's not a very appetizing job, but Bob tells me it gets easier to do after you have done a few fish. The next step is to cure the skin. Here, Bob made his first mistake—he didn't know you had to cure the skin *before* stretching it over a piece of styrofoam which you have to cut to the shape and size of the fish and then let it dry!

His wife Helen gave him a choice, the fish goes—or *he* goes!

To cure the hide, soak it in a borax and water solution for about two days for a small fish and up to five days for a big one. The soaking preserves the hide and makes it more pliable when you stretch it on the styrofoam. Then sew and pin the skin to the styrofoam and let it dry for a few

days. Next, patch the holes you have made by using household wax. Do this by heating it and using a small paint brush to "paint" the wax on. Don't use wax on the whole fish—just where it's needed. Use a knife to scrape it so that it blends in with the rest of the fish.

Your next step is to get a glass eye that will match your fish. Your local hobby shop can get these eyes but if not, a taxidermist may sell you one or tell you where they're available. The last step is to paint the fish and make it look like it was in the beginning. This is the hardest part. Get a picture of the fish in color and match the colors. The Pennsylvania Fish Commission publishes a book called *Pennsylvania Fishes* (50¢) or a wall chart which has most of Pennsylvania's fish in full color for just forty cents. You can obtain one of these by sending your check or money order to the Pennsylvania Fish Commission, Box 1673, Harrisburg, Pennsylvania 17120.

When painting the fish, use oil paints and by mixing these colors carefully, you can get the colors you want. After your fish is painted let it dry and then spray it with clear shellack. This gives the fish a "wet" look and keeps the paint from chipping. By the way, you can't sell or mount fish for pay unless you have a Taxidermist License, but why would you want to sell one of your own trophy fish? As for Bob, he has mounted over 35 fish in the past few months and every one he does gets better than the last.

Here's How Its Done

photos by the author

Editor's note: Special Waterways Patrolman Bob Kopta is an avid boater of the first water but he's also a capable photographer as demonstrated in the step-by-step photo sequence he made of friend and co-worker Bob Snyder mounting a variety of species.

Before skinning out your fish draw an outline of it on paper and transfer to a block of styrofoam. Cut block to a rough duplicate of the fish's proportions and sand it smooth.

A dull table knife is best for skinning. Use scissors to cut away fins from flesh inside. All meaty tissue in head (including eyes) should be removed before soaking in borax solution 2 to 5 days.

Stretch cured skin over the sanded styrofoam form and place in a well ventilated area to dry. Smaller pieces of foam may be placed on each side of the fins to prevent curling while drying.



Placing tissue paper on the backsides of the fins, then painting them with wax helps strengthen them and aids in repairing torn fins. Use ordinary household paraffin.

After wax has hardened, trim away the excess paper backing. Careful attention with a small scissors is necessary in this step. Any holes or damaged areas in the skin can be repaired now with wax.

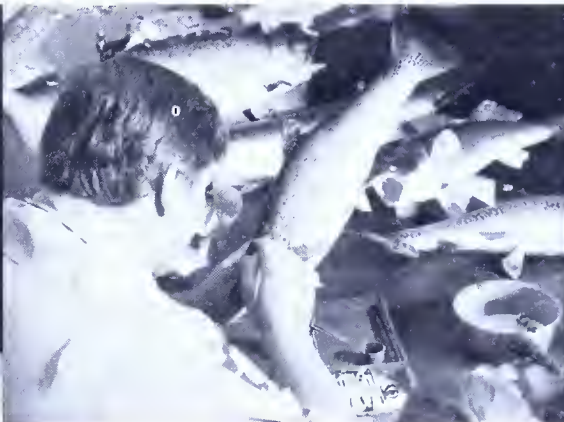
Head cavity is stuffed with papier-mache—eye cavity with wax. Wax used on skin surface should be scraped to approximate skin texture in the area where used. Entire mount should be shellacked before painting.



Painting your mount will be the most difficult part of the project. Fortunately, oil paints can be mixed to true colors. Compare your mix with a photo before applying.

Bob Snyder puts spots and fine detail in place with fine brush tip. This is the final step prior to spraying finished mount with shellac.

Best way to shellac is with a little spray gun available at most hobby shops. Spraying eliminates brush marks. Bob's sons, Jimmy and Michael seem fascinated by Dad's work. Let your mount dry for 24 hours and its ready for the wall!



PREVENT RAMP CONGESTION

Launching ramp congestion can build up fast. All it takes is one inexperienced or thoughtless person.

The following tips on trailering and launching will help you become a proficient trailer handler and avoid the sneers of impatient boatmen waiting in line to launch their boats.

Trailer manufacturers specify load capacities for each model. Stay within these limits, and your rig will be easier to tow, launch and load. Be sure to include the weight of the motor and assorted gear when you're adding up the total.

ADJUST ROLLERS

Have your dealer correctly adjust the trailer rollers to fit the contour of the hull. Besides protecting the boat from distortion, your rig will slide on and off the trailer easier.

Surprisingly, many boatmen struggle and swear because they don't understand the correct operating procedures of trailer mechanisms. If you have any questions, ask your marine dealer. It's not a bad idea to have him demonstrate the correct technique several times.

If you are inexperienced in towing a trailer, take a few practice runs. You'll notice it will take longer to stop, and acceleration will be slower. Add a couple of inches when turning a corner so the trailer will clear without hitting the curb. An empty parking lot is a good practice field for perfecting trailering techniques.

BACKING TRAILER

When backing a trailer, remember that the car's steering wheel must be turned in the opposite direction from the way you want the trailer to go. If you want the trailer to go to the right, turn the wheel to



Wait a minute! Suppose Dad hit the brakes firmly and Mom lost her grip on that line—what would happen to that little fellow and the lunch? Better to have him safely ashore during launching. Photo: Courtesy Evinrude Motors.

the left and vice versa. This is the secret of expert trailer handling. Practicing backing before actually trying it on the launching ramp will save you confusion and embarrassment.

Make sure your rig is ready to go when you're on the ramp. Boating gear should be transferred into the boat while you're waiting. Make sure the drain plug is installed.

Launching is a two man job with one person acting as a guide for the driver. Line your rig up at a right angle to the water. Back up slowly and stop a few feet from the edge. Remove the tie-downs, tilt the outboard motor up and unlock the bow winch.

LAUNCHING PROCEDURES

Back up again until the trailer wheels are one or two inches into the water. Set the emergency brake and put the car in gear. Have your guide hold onto a lead line from the bow. This will prevent the boat from drifting into open water when it slides off the trailer.

The loading procedure is just as simple. Line up the trailer and the boat. Connect the launching cable and let the winch do the work of re-trailering. Pull the rig out of the water and off to the side before checking all fasteners, plugs and tie-downs.

All it takes to become an expert is a little practice.

ROUTINE TRAILER CHECK

Important For Safety

Trailer boating has opened waterways across the country to boatmen. With a good boat trailer, properly balanced and carefully checked, boatmen can travel thousands of miles with no worries.

Before each trip, it is a good idea to make a routine check of the trailer. The safety chains should be inspected to be sure they are properly secured so as to keep the trailer behind the car in the event it should come loose from the hitch. Although the average boatman will probably never experience this, it is an excellent safety precaution.

LOADING TRAILER

When you mount your boat on the trailer, the center of gravity, with the motor attached and loaded with normal gear, should be slightly forward of center so that some of the weight rests on the hitch. This will prevent bobbing of trailer and boat while on the road.

Most boatmen make it a practice to release the tension on the winch rope and tie-downs when the boat and trailer are not being used. Before starting a trip, remember to secure the tie-down and tighten the winch rope.

A visual check should be made to see that all keel and hull supports are in place. Also check the trailer lights to see that they are operating properly, keep the rollers and winch properly lubricated and repack the wheel bearings according to the manufacturers recommendations.

USE FRAME HITCH

It is a good idea to use a frame hitch rather than a bumper hitch when pulling a boat trailer. Another

piece of required equipment that will offer advantages is an outside rear view mirror on the car.

Driving a trailer rig is easy, but it is different from driving a car; it takes a certain amount of practice. Take it easy until you become accustomed to the added weight. And remember that you are now driving what amounts to a very long car, so be absolutely certain that you know the distances and time required to pass, to turn a corner, and to stop.

With these simple precautions there will be no need to worry when on the road with a boat trailer. As an added safety measure, however, it is always a good idea to check the hitch, winch, safety chains and tie-downs when stops are made along the way.

BALANCE TRAILER WHEELS

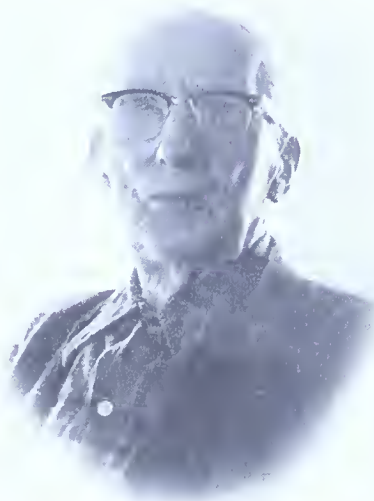
The wheels on your trailer need to be correctly balanced just as your car wheels do, for safety and to prevent vibration, side-sway and wear. Any service station should be able to balance the wheels correctly.

Safety afloat is fine—but don't neglect checking your trailer enroute. You owe it to yourself and fellow travelers. Photo: Courtesy Evinrude Motors.



George Bitting

remembers . . .



Mr. George Bitting of Millerstown, Pa.

by Jim Yoder

Historical accounts had recorded bits and pieces of the Shad fishery on the Juniata but I thought it was just short of believable that anyone who participated in that era would still be around to talk about it.

A telephone call found Mr. Bitting anxious to recount his teenage days along the Juniata River and a few days later I arrived with a tape recorder and dozens of questions.

George Bitting told me he was born in Perry (pronounced "purry" by the natives) County in 1885. "That would make you about 87?" "Yes, somewhere around there," he replied, with apparent disinterest for the statistic. I found it difficult to believe—this octogenarian moves about with a spriteness to be envied by men two decades his junior! George lives alone and does his own immaculate job of housekeeping.

"How old were you when you fished for shad in the Juniata?" I asked. "Oh, I can't tell you exactly . . . I suppose I was around 12-14 . . . around there. We fished downstream from the dam at Old Ferry, this was built across the river just upstream from Wildcat Creek. We ran our seines above where Wildcat Creek entered the river." Mr. Bitting then described the dam as one of stone and wood construction and "seven or eight feet high." According to his account, the dam served as a "cross-over" for the canal boats. Above the dam the canal served Millerstown on the east bank; boats crossed at the dam and proceeded downstream to Newport on the west bank.

"There was a ropehouse on each side—just above the dam. It seems they had a gasoline engine in the ropehouse—I just don't remember how they did it, but the rope went the whole way across. I saw how

they pulled the canal boats across the river . . . but I was just young then."

I was surprised at the mention of gasoline engines, "Could it have been a steam engine that supplied the power?"

"Well, I don't know . . . it could have been done with waterpower. You see, when they opened these gates that filled the canal there was an awful pressure there. They would put the mules in the boat and pull it across. I heard fellows telling that they 'walked' the mules across the breast of the dam, but that isn't true. You couldn't walk across the dam because it sloped too much and there was always too much water there."

"I noticed a number of old stone homes here in Millerstown and up along the river. Were they part of the landscape back in those days?"

"Yes," he said, "they were used in the canal days. They were hotels, most of them . . . that was a long time ago."

Pointing to a sketch he had made of the dam and the old fishery below, the old timer continued. "Now there were three fish baskets here, on this side of the island, and two on the other side. And here (pointing farther downstream) George Rhoades had one, and Walter Brant had one down there. This was right above where we fished . . . where we seined.

"Did these baskets catch shad?" I asked.

"Oh no, I don't think they ever caught any shad with the fish baskets, they caught mostly carp and eels."

"What did they do with the carp?" I asked curiously.

"They ate them—they'd eat them today if they could get them. There were an awful lot of eels, be-



WHEN THE



Artist Lin Steiner re-creates here the dam at Old Ferry.

HAD RAN THE JUNIATA

fore *that dam* was put in." (This was repeated time and again throughout the interview.) "When the Conowingo Dam was put in, that's when we lost out. After that we couldn't get any shad—after they built that dam."

"Tell me," I continued, "did anyone ever think of fishing for shad with hook and line in those days?"

"Yes," he replied with some hesitancy, "they fished with hook and line, but not too many of them. On Ascension Day, still, that was the day that everybody would gather along the river and fish . . . but mostly with seines."

"There were only two fisheries that I knew of and the other one was about three miles below where we fished—that's the one Al Wright had. I couldn't tell you who his helpers were, but he's the man who had the fishery below us."

"What did they do with the shad when they caught them? Salt them? Smoke them?" I queried.

"Sell them fresh mostly," he recounted, "a fellow would come there pretty near every night from way up along the big river (Susquehanna) and maybe buy the whole bunch then go up there and sell them. If we got 35¢ for a roe shad, a big one, why we thought that was a good price. The buck shad brought around 15-20¢."

As Mr. Bitting recalled the events of the shad-taking on the Juniata, I wondered just how extensive the run might have been. "They said he kept an account and in the three years that we fished he bought 1561 shad from our fishery. You know, there was just a certain time of the year—in May—that we fished. In June, after the shad had spawned, they were no good.

"Our seine was 75 yards long and about six feet

deep . . . it would reach down good in eight feet of water. We used a flatboat to run the seine."

"Was this just a big rowboat?"

"Yes, that boat was about, Oh, I'd say about 18 feet long, about 7 feet wide and about 14 inches deep. We had the cork line coiled on one side of the boat and the lead line coiled on the other. Two men would go out in that boat, one handled the two oars and the other the net. We'd make a big circle with the boat and bring the seine back to a stone that jugged out into the river. It made sort of an eddy there and we didn't have to fight the current.

"Josiah Grubb was the man who owned the fishery and Earl Horting, Harry Grubb, Stewart Snider, William Bitting (my brother) and I were his helpers."

Mr. Bitting's memory of names and the finer details of the dam, the canal boats—even the size of the seine's mesh, astounded me. His account of the shad fishery was so vividly described, the writer had a difficult time remembering it was 1972. I could picture myself, bib-overalls and all, wading the Juniata—tugging at the seine to bring in the haul. Ah yes . . . meanwhile, back at the tape recorder and the interview.

"Did you ever catch any other fish besides shad in the Juniata?" Up to this point Mr. Bitting had mentioned only shad, carp, and eels. "How about bass? Walleyes? Pickerel? Rock Bass?"

"No, you see these nets had three inch mesh, that was the law, and the smaller fish would go right through them."

"But how about using hook and line," I pressed on, "for anything else, say bass? Just what did you have in the Juniata way back then?"

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When the Shad Ran the Juniata

continued from previous page

"We got mostly eels and suckers. At that time there were very few bass . . . very few bass," he replied—sadly, I thought.

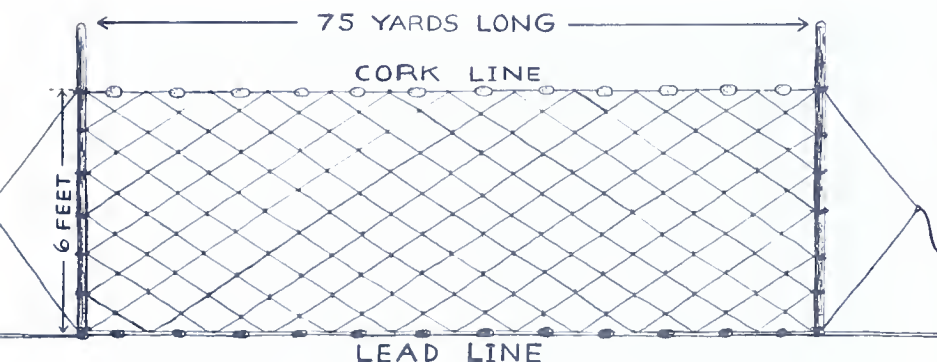
"Were there trout in the smaller streams that emptied into the Juniata?"

"There may have been but I don't recall as there were. You see, people fished the creeks for eels mostly. They'd go up these creeks, still, and get them with hook and line. After *that dam* was put in, well, we just didn't get any fish anymore . . . only what they stocked—you know, put in."

"You mentioned, earlier, a man who ran a 'steamer' on the canal. Can you tell me anything about him?"

"Yes, that was Warren Cross. After they quit using the canal altogether, he would come down the river when they would open the gates here and he would go to Newport—down the canal."

The pool above the dam apparently provided some "elbow room" for the little steamer. "It backed the



The seines of early shad men were the tools of the trade. (not to scale)

water up quite a ways," he said, pointing to an area beyond the border of his sketch.

"To Thompsettown?" I volunteered.

"Oh no, not that far, but it went up there quite a ways."

Mr. Bitting indicated three piers on his sketch, just above the breast of the dam. "I don't know what those piers were used for. I always thought they were protection for the boats, in case anything happened, but I'm just guessing. They were built higher than the surface of the water . . . they were stone and I suppose when the river is low you'd still be able to see them. I never did know what they were there for."

"Did you ever hear of any sturgeon being caught in the Juniata?"

"Yes, I never saw any but I heard of two being caught around Newport . . . in Al Wright's fish basket."

"Just a few days ago I heard of a sturgeon having been caught 'way back that weighed something like 96 pounds."

"Well, it could be possible," he replied, "I didn't see

it but they told me it was a big fish. I mind of them catching it."

"Do you ever wish you could go back and fish for shad the way you did then?"

"Yes, you know, they were supposed to, when they put *that dam* in, they were supposed to put a fishway in . . . but they never did. They brought it up here a couple of years ago and that's all the further it ever went . . . they never did anything."

The apparent absence of gamefish in the Juniata in Mr. Bitting's early years came as a surprise to me. I found it difficult to comprehend that the Juniata, one of the finest gamefish waters in the Commonwealth today, was at one time but a carp and sucker fishery after the shad run subsided. Eels were a great favorite then and were apparently abundant but they too stopped coming—"when they put *that dam* in."

Many historical accounts record the annual spring migration of the American Shad as one of great economical significance. The Delaware River is the last Pennsylvania waterway to sustain a shad run. Pollution "blocks" in its lower reaches make even this remnant of a once great fishery a touch-and-go kind of thing. And for those who still enjoy this tremendous sport fishery along the Commonwealth's eastern boundary the proposed Tock's Island Dam may write the final chapter in the history of shad fishing in Pennsylvania. Will it be another Conowingo?

Shad have grown accustomed to "uphill-all-the-way" but in the last century, each foot of forward "progress" has set the shad back another two. Dams, for whatever purpose erected, draw a sharp line of demarcation for shad on their spawning run.

From *"The Report of the State Commissioner of Fisheries, 1892-94"*:

*"In May, 1829, the run of shad in the Juniata was phenomenal, the Mifflin Eagle, on the 19th of that month says that 'it is stated that the shad are caught in much greater abundance below the dam at North's Island, in the Juniata, than has ever been known at any previous time. * * * The dam at North's Island retards their further progress and the consequence is that the people further up the Juniata are deprived of the luxury of fresh shad, which so abundantly falls to the lot of their neighbors a few miles further down.' Thus was ruin brought to a profitable industry in the upper waters of the Juniata."*

The same "Report" decries the loss of the shad fishery to the upper waters of the Susquehanna by the construction of the Nanticoke Dam in Luzerne County and similar losses on the Delaware, Lackawaxen and Schuylkill Rivers. These were the *early* dams built to maintain water levels in the canal system and in some cases, like the Nanticoke Dam, served as a "cross-over" just as did the dam at Old Ferry.

The great Columbia Dam on the Susquehanna, which was but a foretaste of things to come, cut off all further shad passage upstream. Fishways were attempted, met with mixed success and were eventually abandoned as impractical. The destruction of

Fish markets have all but disappeared on the Pennsylvania scene. "If we got 35¢ for a roe shad, a big one, why we thought that was a good price . . ."



the dam by flood waters was but a brief respite. But, from the "Report of 1899" "Soon after the breaks in the Columbia Dam the fishermen here became very enthusiastic. . . ."

Their enthusiasm was to be short-termed. The construction of the Conowingo Dam, literally indestructible steel and concrete, signalled the apparent end to the shad fishery upstream.

The future? A new fish collection device constructed below the Conowingo underwent initial tests last May. American Shad will be collected and transferred upstream. If the "man-handling" doesn't disorient the shad and they continue their migration upstream, similar devices will be installed on the power dams farther up the river. In the meantime, since the signing of a joint Federal-State agreement in early 1963, fertilized American Shad eggs have been transplanted in the headwaters of the Susquehanna River (and in some selected tributaries—the Juniata is one) and studies since that time have "demonstrated that shad eggs can hatch, larvae can develop, and juveniles can survive and prosper in most of the Susquehanna River. . . ."

The program calls for five years of testing before considering the actual construction of fishways—costs of which have been variously estimated at 10 to 20 million dollars.

The first tests conducted in late May were done under adverse conditions. Water temperatures were much lower than those required to "trigger" the shad migration and the Susquehanna River had been consistently higher than normal. More water passed through Conowingo in early 1972 than during the same period in any of the preceeding 45 years! Shad were few in numbers, both at the collection facility and in the tailrace fishery below the dam.

At any rate, it will be some time before the feasibility of shad lifts and/or ladders will be finally determined. And what about the shad themselves? We're dealing with generations—a half century's

worth—of dam blocked progenitors. Has a disturbed environment dulled, perhaps wiped out the migrating instincts that were natural a century ago? It's akin to isolating 100 generations of cats, restricting them to a cereal diet and wondering "will they still prefer fish?"

But then, the White Shad has been introduced into Western rivers where they never existed; they have successfully negotiated the fishways, ladders and traps . . . and have become established!

Would the anticipated shad fishery justify the cost? There are many questions to be answered before the American Shad is seen again in the Juniata River.



The Conowingo Dam in Maryland is the first migration block encountered by the Shad. The experimental fish collection facility is shown below. Fish are diverted into the trap by sub-surface weirs; hopper, below left, brings catch to surface then transfers fish, below right, to sorting tank. Shad are removed and placed in river above dam.



this is the story of

"THE MAD TURK"

and her contribution to—

"THE DEEP SIX"

by George E. Dolnack, Jr.

illustrated by Nick Rosato

Some years ago a friend bought a 12 foot boat kit and recruited me to help him assemble it. We spent more than a few weekends doing the job in his garage and had a lot of fun at the same time.

After it was put together, we painted it a buff yellow and trimmed it in a deep green. The name came next and it was christened "The Mad Turk" for no apparent reason other than it was different. A 10 horse Martin was chosen to speed it thru the water and an equally new trailer completed the outfit.

Considerable thought was given to the maiden voyage of "The Mad Turk" and we finally decided to launch her at the Youghiogheny Reservoir at Confluence in Somerset and Fayette counties. The shake-down cruise as it were, was to be combined with some fishing.

So, early one bright and warm Sunday in August, we were merrily on our way to Confluence. An hour and a half later at the launching ramp, "The Mad Turk" slid off the trailer into the water.

Fishing tackle, oars, a tool box and flotation cushions were loaded into the boat and then the gas tank was filled. A safety chain was fastened to an eyebolt on the inside of the transom and the other end was secured to the outboard's stern bracket.

On the first pull of the starter cord, the Martin hummed to life. And off we went, skimming effortlessly across the water.

My friend made a few practice turns at different speeds to get the feel of the boat and then he opened her up. We cruised under the Route 40 bridge and headed for Maryland. Upon reaching the Mason-Dixon line, we swung the boat around and headed back into Pennsylvania. An inlet looked inviting, so we stopped to do a little fishing.

As noon approached, we pulled our stringer of panfish in and started back towards the car to pick up our lunches that we had forgotten in our haste to get out on the water. The motor was wide open and we were moving along at a nice clip approaching the

continued on next page





Photos: Courtesy Evinrude Motors

BOATER'S TIP

PLAY IT SAFE FROM THE START

Many accidents occur before the boat ever leaves the dock. One of the primary causes of accidents dockside is the boatman who tries to step into his boat heavily laden with a motor or heavy tackle box. It's not too uncommon to find the boatman landing in the water and wondering how he got there.

The proper way to load a boat or attach a motor is to place the equipment on the dock or pier, step into the boat, and then pick up the equipment to put it in its place.

THE DEEP SIX

continued from previous page

Route 40 bridge from the south. I was sitting on the front seat and faced the bow. A speedy, trim boat raced towards us and I followed it around as it roared past, kicking up a heavy wake and spray.

I pointed at the other boat and nodded my head at my friend. He gave me a big grin looking like a possum chomping on a melon and then turned the boat slightly to the right and then quickly back to the left again without throttling down.

The sudden maneuver caught me unaware and off balance and I instinctively turned my body around and grabbed the gunwales with my hands in a reflex action. I turned my head towards my friend and gave him a scolding scowl. He repeated the maneuver once again just as I turned my head towards the bow.

Suddenly I was conscious that something was amiss for the boat had slowed down and the bow plowed into the water. Then I heard a cacophony of sounds coming from in back of me. At about the same time the boat began to vibrate and I turned to see the motor not only oscillating wildly, but thrashing angrily in and out of the water as well.

My friend's hands and arms were flailing about like a windmill trying to get things under control. "Great scot!" I thought, "The Mad Turk is living up to its name!"

A sharp snap followed by a thunk pierced the other noises. Then silence. My friend turned around and stared at me with a stunned look on his ashen face.

He put out his arms, gestured and shrugged his shoulders as he simply said, "The motor's gone."

I couldn't fathom what he had said until he moved aside to expose the stern clamp still secured to the transom with the safety chain intact. Sure enough, the motor was in the deep six. The wild gyrations were just too much for the clamp and it gave way. I guess we were lucky not to lose the transom.

We attempted to locate the motor by diving but it was too deep and anyway, the boat had drifted away from the spot where the motor fell into the water. Then we rowed to a boat dock on the shore where a man had witnessed our unusual event. He confirmed our suspicions that it was too deep for diving without scuba gear and offered to tow us back to our car.

We looked somewhat odd coming in without a motor and it was quite obvious that something had happened. So we were the recipients of a barrage of questions like, "What happened? Lose your motor?"

When we finally got away and reached the car I said to my friend, "Well, there's a couple of hundred in the drink."

He looked at me with a funny grin and said, "I'm going to be embarrassed when I explain this to the insurance company."

"How's that?" I asked, a bit perplexed.

"Oh," he replied nonchalantly, "the guy that sold me the motor also talked me into some insurance for a couple of dollars."

Talk about luck! Or was it just good planning?

The next weekend we were back out on the lake with a new motor, more insurance and a little wiser from the experience.

FORMER EDITOR

in memoriam

George W. Forrest, who served the Pennsylvania Fish Commission in a number of capacities, including Editor of the Pennsylvania Angler, died suddenly at his home in York on July 11, 1972.

George joined the Commission in 1950 and was the Angler's editor until 1956 when he left to enter into private employment. In 1960 he returned, again serving as editor until 1964 at which time he became Chief of the former Public Relations Division. Since 1968 he had been in charge of special publications and promotion programs.

George W. Forrest
1910-1972



NEWS BRIEF

FISH COMMISSION ELECTS OFFICERS—

At the July 14, 1972 meeting, the Pennsylvania Fish Commission elected Howard R. Heiny, Williamsport, to succeed Calvin J. Kern, Whitehall, as president of the nine-member board. A member since 1966, Mr. Heiny is an experienced boatman and was the board's vice-president prior to the election. Douglas McWilliams, Bear Gap, was elected vice-president. A Commission member since 1964, he is a past president of the group.

THE HANDIEST HOOK HONE

by C. Boyd Pfeiffer

There have always been several standard tips on how to sharpen hooks. One, of course is to always keep a hook hone in your tackle box or fishing vest and touch up the hooks when necessary. Or, if you are in need of an extra fast cutting sharpener, replace the regular hone with a small ignition file. And if you are caught without a file or stone use the abrasive striking surface of a pack of matches as an emergency measure.

The problem with these tips is that the hook hone (or its substitute) is always carried loose in a poc-



ket, fishing vest, or tackle box. This only invites losing, misplacing, or breaking this necessary piece of equipment. One sure way to prevent this and always have the hone with you is to glue the hone or file somewhere on your tackle box. Be sure to use a good strong waterproof glue so that the hone will be in place many seasons to come. Prominently displayed, the hook hone will be a constant reminder to you to touch up your hooks and keep them sharp for that next lunker.

KEYSTONE CAMPING

by Thad Bukowski

Camping Along the Allegheny

The fog lifts off the big river and smoke curls lazily straight up from the many campfires. The smell of bacon greets early morning fishermen as they return in their boats, with much shore clanging, to get at early chow.

As a camper I usually sneak out before breakfast for a short stint with the artificials and surprise myself occasionally with a few good bass or walleye, then come back ravenous for a morning feed. Toast, jam, bacon, eggs and coffee and my day has begun beautifully.

The autumn season is one of the finest for the camper to turn to the rivers. Nights are cooler and when the aspens and tulips begin to turn yellow and the maples a blushing pink, the river fish go on a feeding spree after an unproductive summer.

The broad stretches of the Allegheny River, particularly from Irvine to Tionesta, where the Buckaloons campground hinges the northwest corner of the Allegheny National Forest all the way downstream to President Eddy and beyond, nearly 40 miles, is a camping-fisherman's opportunity to connect big during the fall.

The Allegheny through these areas is great fishing water. Lud Haller of Tionesta, who keeps a record of big fish caught in the Allegheny-Tionesta watershed, recorded over 70 legal muskellunge taken last year. Numer-

ous walleye are caught, particularly as fall progresses into winter, and bass fishing climaxes before the walleye season hits its peak. Top sized "pike" was a 13 pounder taken within the past two years.

At Irvine and the Buckaloons campground, the Brokenstraw flows into the Allegheny. At Tionesta, Tubbs Run enters and downstream below President at Henry's Bend, the Pithole enters. Really big brown trout are caught at these points and the gravel bank where the Tionesta Creek flows into the Allegheny long has been a top walleye and muskie hang-out. Lower Pithole, hard to get into, has one of the biggest "residential" populations of trout in any stream of this area, according to Pennsylvania Fish Commission biologist checks within the past three years.

The interested camper has good camping points at Buckaloons and Cloverleaf Eddy which is between Warren and Tidioute and rental boats are available here. Five miles downstream from West Hickory on the west side of the river, a 200 site all-electric private campground has top-notch-facilities. One edge of Tionesta has a small private campsite while the other edge harbors a Corps of Engineers site which accommodates tent campers on one side of a dead-end road in a hemlock grove and trailers in a more open area on the other side.

Somewhat farther downstream, just below Hunter's Bridge, a primitive but picturesque site is on an island of the Allegheny and another small campsite is located at the lower



Above: Nut trees shade campers at Island Park, an island campsite just downstream from Hunters Bridge which crosses the Allegheny downstream from Tionesta. Below: Boats are available for rental at Cloverleaf Eddy, one of a few places along the river in addition to Klinestiver's at Tidioute.



edge of the President Eddy.

Klinestivers at Tidioute offers a free boat access and small boat accesses are also available at President, Henry's Bend, Tionesta, West Hickory, Cloverleaf and Buckaloons. Boats may also be rented at the Cloverleaf Eddy and Klinestivers.

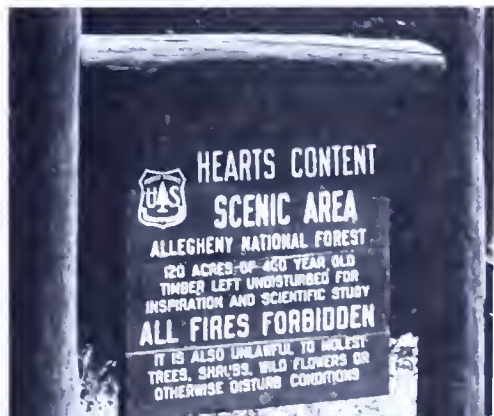
Those interested in float fishing have outstanding possibilities to take one-day stints from Irvine to Cloverleaf, Cloverleaf to Tidioute, Tidioute to West Hickory, West Hickory to Tion-

continued on page 28

Many public and private campsites are to be found along the Allegheny River. This private campsite offers 200 all-electric hookups across the river from Tionesta. It is reached via the West Hickory bridge and downstream five miles.



Heart's Content Scenic Area surrounds the camper with 120 acre stand of huge 400 year old timber.





WHAT NEXT?

While eating in a restaurant in Mercer County, Sgt. Dunkle and Sgt. DeBerti of the Pennsylvania State Police came in and asked what we were doing around 1:00 P.M. We said we were available, why? They said they had a small problem . . . then decided it was a *large* problem. A woman had fallen in a house and couldn't get up. The problem was a sizeable one—the woman weighed between 450 and 500 pounds!

When we arrived we found six State Police, 3 men from the ambulance and the woman's husband with WWP Ansell—that made an even dozen men. A special platform had to be made and then it was still a job getting her into the ambulance. After about three hours of building, figuring and hard lifting, we managed to get her into the ambulance and on the way to the hospital!

Cloyd W. Hollen
Asst. Supervisor (Region I)

PLUM FOOLISHNESS!

One of the most common occurrences at Pymatuning Lake is the use of small cartop prams or other flat bottom boats, which were found to be overloaded just by the weight of the occupants without counting the weight of their motor and fishing equipment. This particular type boat was not meant for a lake such as Pymatuning. On even a calm day, when the water is fairly smooth, there still is a possible chance of overturning, let alone when the lake is fairly rough. This type of boat was manufactured for use on a small farm pond or possibly in a marsh or swamp where the water does not get rough or choppy. Above all else, common sense should be the number one factor when deciding on the type of boat for the larger lakes throughout the state. The Capacity Plate on all boats should be observed and the rule followed for each individual's safety while boating.

Warren L. Beaver
WWP (W. Crawford County)

JOHN "FINE" DOE—

I happened to meet a gentleman that was determined to pick a middle name because he had none at the time. When I asked what it would be, he replied, "Fine, because it seems that no matter where I go fishing I end up being fined for one violation or another!"

Frank Schilling
WWP (Philadelphia County)

NEW TECHNIQUE?

Within a two hour period I had the privilege to observe the following incidents at the first in-season trout planting at Parker Dam State Park. The wife of a friend of mine, removing a dead worm from her hook with a spring loaded clothespin, and trying



"WHAT A WAY TO ADVERTISE!"

to put a live worm back on with the same clothespin; an angler, on his backcast, catch and land, but with the help of the driver and a few other fishermen, a 4000 pound car. Just another average day at Parker Dam.

Edward W. Brown
WWP (Clearfield County)

DOUBTFUL—

On April 21st Hunter's Lake received an in-season stocking of Rainbow trout. Due to the cold water the fishermen were not having much luck and most left in disgust. To add insult to injury a pair of Merganser ducks were having a great day. After seeing one of the ducks come up with

a fish, one of the fishermen, asked if it would be legal to tie one of the ducks on the line of his spinning rod and let the duck catch him a limit.

G. W. Frank Kann
WWP (Sullivan/Lycoming County)

AT LAST WE HEAR IT!

At the recent Pleasure Boating Safety course held in the Clarion County Court House, the turnout was very gratifying. The group had many questions concerning boat handling and equipment that should be carried on board a boat. To me, the most gratifying comment came after the final session, when one of the students said, "I have been boating for five years, and in these three nights, I have learned so much. I realize now, that the patrolmen have quite a job on their hands, trying to educate the public as to boating safety, and I wish to thank you and Mr. Swanson for a well presented and very educational course. If only more people would come and learn what it is all about." One comment like this one makes it worthwhile, especially after hearing some like, "I have been boating for 'X' years, and don't need *you* to tell me how to operate my boat."

Robert J. Cortez
WWP (Clarion County)

LESSONS ANYONE?

While on patrol of the Susquehanna River early this spring, SWP Terry Baker came upon a young lad fishing. After observing him for some time it was apparent the young fellow knew how to handle a fishing rod. Upon talking to him it was learned that his name was John Reynolds, age 16, from York. He has 12 fishing citations from the Pennsylvania Fish Commission and said he is a "Past Pennsylvania Fish Commission Fishing Champion." This last title may not be official but I certainly think he should be given some consideration for such a title.

William F. Hartle
WWP (York County)

CUT AN ANCHOR— SAVE A LIFE

On two occasions this spring boat fishermen's anchors have been caught on bottom of lakes. Each time the well meaning angler pulled too hard and capsized his boat. They not only lost fishing gear, but it could have been there lives.

H. F. Reynolds
WWP (Wayne County)

EVERY LITTLE BIT HELPS

Recently two high school students playing hookie from school to go fishing were apprehended for fish law violations by Deputy Walter Howard. Upon returning to school they approached their classmates with a can labeled "Please Help Support Your Fish Commission!" I don't know how much their classmates helped, but the hookie players did.

Arthur A. Herman
WWP (Westmoreland County)

DUMP HIM!

On one of the trout stocking of Little Mahoning Creek in Indiana County a helicopter was donated to stock some trout at some remote spots on the stream. Some of the comments overheard were, "Wonderful," "best stocking I have ever seen," "That's it, hide them from us," "Put them where we can't find them," and "They ought to put the patrolman in that bucket and dump him in the stream." Needless to say this was one time I didn't try to satisfy all the fishermen.

Allen G. Stiffler
WWP (Indiana County)

CLEANUP VOLUNTEERS

One of the parking places on the Fish For Fun project on Big Kettle Creek at Bunnell Bridge had considerable litter. Two families deserve much credit for the cleaning up of this litter over the holiday: The Lysle D. Gardner family of 919 W. 3rd St., Erie, Pa., and the Norman B. Stok family of 919½ W. 3rd St., Erie, Pa. These people picked up and raked up eight bushels of cans, paper and other rubbish. How much better it looks now along this beautiful stream! Slim Croyle is paying to have the rubbish hauled away. Many thanks to these concerned people.

Kenneth Aley
WWP (Potter County)

OPERATION "FILL-A-SACK"

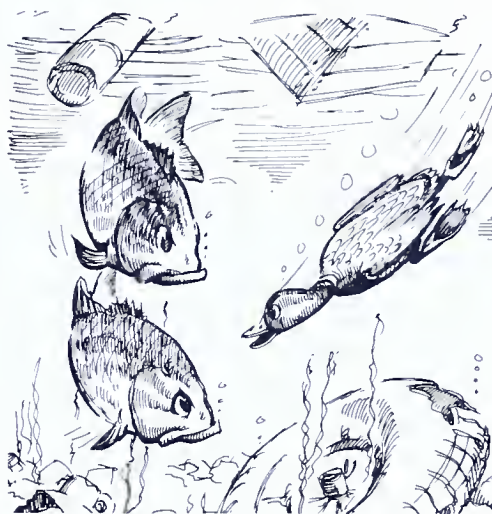
Trout Unlimited is distributing and using litter bags to clean up everyone's trash. One landowner quit tacking up No Trespassing signs when he came across several members doing just that. Take the hint, save your right to use this man's land and take your litter home.

H. Porter Duvall
WWP (Jefferson County)

SMORGASBORD?

This tale was related to me by D. G. P. Walter Whitman about a fellow worker who made a trip to Pleasant Gap and told Walt he knew why the fish wouldn't bite. He said he was quite surprised at one pond he saw which he claims was a "Smorgasbord" because it had any and every kind of feed a fish could want, he decided we put the fish in this pond a day or so before stocking and filled them up so that after stocking they are so full they won't bite. I don't quite agree—I've received a few loads that seemed pretty hungry and they must not have gotten to that particular pond.

James H. Lauer
WWP (Lycoming County)



"YOU THINK THIS IS BAD? . . . YOU SHOULD SEE THE STUFF I HAVE TO FLY THROUGH!"

FROM FAR AND NEAR—

I have been pleasantly surprised by the number of non-residents that we have checked on Clover Creek this year. I have personally checked fishermen from at least 6 or 7 states on Clover Creek this year. I was, however, a little taken back when SWP Larry Boor apprehended a fellow from Brazil fishing without a license on Clover Creek. I guess you could say "they come from miles around to fish Clover Creek."

Walter A. Rosser
WWP (Blair County)

INQUISITIVE—

While stocking fry size largemouth in the new lake at Lackawanna State Park, a gentleman seemed quite interested in what was taking place, although he did not comment about anything until I was done stocking the fish. The gentleman then questioned me to great lengths, as to how long it would take for the bass to be

legal, how big the lake was, etc. He then asked where the fish had come from, and I told him they were flown in by plane to Clifford Airport. The gentleman then bought a subscription to the Angler, for his grandson, because he said he was not a fisherman.

Robert E. Fasching
WWP (Lackawanna County)

FINE NEW ACCESS

On Memorial Day weekend, the city of Tarentum and the Fish Commission dedicated the new Access Area constructed by the Commission last fall and had a nice turnout of boats and people at the ceremonies. The Commission's Engineering Division is to be commended for the nice job they did in constructing this facility and it is certainly appreciated by the Waterways Patrolmen in Allegheny County, the boaters and the officials of the City of Tarentum.

Gerald T. Crayton
WWP (N. Allegheny County)

THANK YOU!

Last spring, during pre-season stocking, we had the welcome help of the Conservation Club from the Chief Logan Campus of the Mifflin County School District, in the stocking of Penns Creek.

These young men not only did a tremendous job of trout stocking, but with the help of their advisor, Mr. Gene Brown, they filled a pickup truck with litter and disposed of it.

Richard Owens
WWP (Mifflin-Juniata Counties)

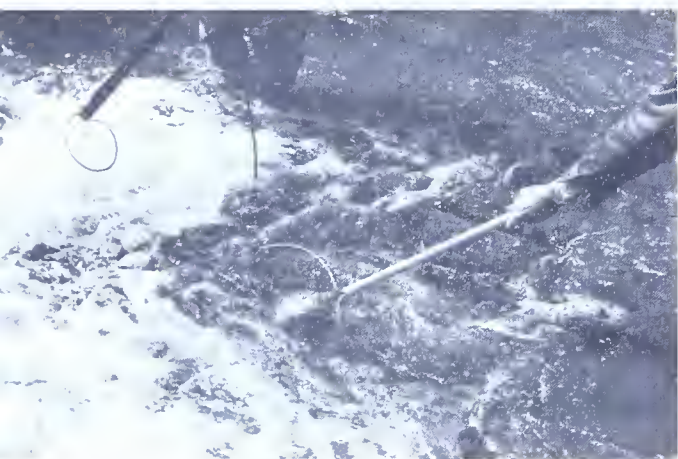
NEVER SAY DIE

Gary Clark of Emporium related the following incident to me. It seems he spotted a palamino trout lying in a hole on the Driftwood Branch. He cast his salmon egg near the fish and he caught the fish. He released it and the fish returned to the same place. His buddy, Phil Burkhouse, came along and Gary told him where the fish was. He in turn cast there and caught the fish and returned it. He cast again and the trout gave it a good look but decided not to go through the same experience again. The trout can thank his lucky stars that he was caught by these fellows for the next time it could mean the frying pan.

Stanley G. Hastings
WWP (Cameron County)



Coho Salmon have been stealing the spotlight at Lake Erie but Lake Run Rainbow Trout, like the 22 inch above, are great favorites with Erie anglers. 3-C-U'ers electro-shock similar specimens, below, for propagation purposes.



One of the Lake Run Rainbows captured is examined (above) by WWP Jim Carter. Some females measure 25"—weigh 6 pounds or more. Below, Bob Hetz extrudes eggs from ripe female on the spot. When a male is captured the eggs will be fertilized and removed to one of 3-C-U's incubation facilities.



A CO-OP SPECIAL

LAKE ERIE

gets "T.L.C."

from 3-C-U sportsmen

by Bill Porter

photos by the author

Lake Erie—3-C-U Trout Association —"Tender Loving Care"—Fish Raising—Fish Catching—where's the story? Sounds confusing, doesn't it? It is! What started out to be a two-day trip to secure material for the regular *Casting with the Co-ops* feature turned into a pleasant conflict of interests—one for the fine work being done by the 3-C-U sportsmen in their nursery complex and another for a lake that to all accounts was far from "dead" in spite of some of the scare literature we had read.

The story should begin with the lake itself. After all it was there before the 3-C-U people got started—in fact before modern man himself got started. Harsh treatment of the inland sea over the years had its impact as pollutant levels rose; debris littered shorelines; some fish populations declined; commercial fishermen disappeared; and normal summer recreation became a chancy thing. But too few people were concerned—or not enough money, or something, deterred the kind of survival action that was needed. Then came the "ecology kick" and things began to reverse themselves—some say "too late," but *we don't think so from the evidence observed on our trip.*

How to prove the point of our contention? The best way might be to follow a single fisherman on the end of an Erie jetty in the early morning mist. The angler has picked up his five-gallon bucket and, after a last look at the lake, begins to work his way over the cement and rocks to the car. Typical question: "Did you have

any luck?" The answer, for us, was not typical: "Got one fair one and a couple of smaller ones."

The fish had to be seen and the bucket was unceremoniously dumped on the beach and out rolled a 23" lake run rainbow and two young jack cohos of very respectable length. Any one of the three would have put our picture in the paper back home, but this angler seemed to take them in stride and talked instead about the "big ones" he had caught earlier in the season. If Lake Erie was dead, *what a way to die!*

The trout and salmon fisheries were not the only *plus* signs. Local fishermen told us of improved catches of perch in the Presque Isle area with tolerable mercury levels. Bass fishing was getting better and other species of sport fish seemed on the upswing. Most sportsmen we talked to had a very positive attitude that the lake was "coming back."

Jerry Honard, an active co-op nursery man, and his son, Dan, were our hosts for one evening and the talk ran, naturally, to fishing. Lake run rainbows and coho salmon held the spotlight for awhile. Then the discussion turned to the general improvement of Lake Erie fishing and we were asked if we would like to see some slides of a few walleyes. Of course, we would and settled back, expecting the usual stringer-dead-fish-kind-of-thing. Instead, there were shots of monstrous walleyes, hordes of fishermen, boats all over the place, and a few comments from the Honards such as: "We kept 87 over

the season;" "We threw back all the ones over four pounds;" "Smaller ones taste better and are quite safe to eat;" "We use sturdy tackle because of the big ones plus the coho and trout that hit occasionally;" and etc., etc., and ETC!! Then, "Come up in July—that's the good walleye time;" "Come back in the fall for the coho;" and "We'll be glad to put you up for the spring rainbows."

All of which would seem to sell the idea that Lake Erie fishing is far from a distant memory—certainly not a thing of the past. It is very much a thing of the present and seems to be getting better all along through the efforts of cooperating governments, both state and international, and the dedicated work of many sportsmen, particularly the 3-C-U affiliated clubs. And now we're back to the original purpose of the trip, the cooperative nursery program in the Lake Erie area, having momentarily lost sight of our purpose under

the lake run rainbows, coho salmon were included in the nursery pens. In 1968 from the Trout Lake Motel site, 10,000 young salmon were released to find their way downstream to the lake. The Cooperative Nursery Coho Program had begun.

Brood stock from the original 1966 wild fry were held over and eggs were taken and reared in a small hatchery unit at the Rupert Spring site. This area has since been expanded and egg jars installed. In addition to the rainbow and coho eggs, walleye eggs have been incubated and have added to the output.

Expansion has been the pattern ever since the 1966 beginning. Currently the 3-C-U complex operates a mixture of nine nurseries and hatcheries, raising thousands of coho, lake run rainbows, some brook trout, and is currently conducting a successful first with the walleyes.

According to Bob Brown, Chief, Cooperative Nursery Branch, the 3-

Fishing Club became an integral supporting member.

Bob Hetz, who manages all 9 nurseries and was one of the early founders, worked with us on the current trip as did Jerry Honard, who is in charge of hatching operations. Others appeared at varying times to assist with stocking, shocking, feeding, and the like. It is proper to say that these two men are typical of the many members of the 3-C-U that have contributed their time, money and talents to make the cooperative nursery program a success for Lake Erie. It is not necessary to list the club rosters—the 3-C-U workers know who they are and so do the fishermen.

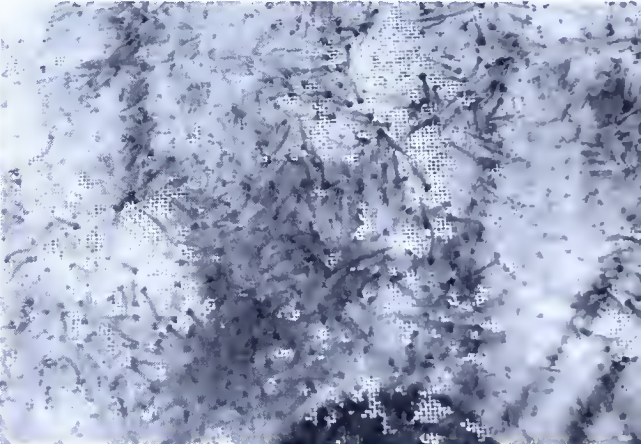
But what of the lonely fisherman that we were talking about earlier in this article? When we saw his catch we noted that the large rainbow had been fin-clipped. It was a 3-C-U fish that was getting ready to make the upstream run to spawn—not in her
continued on next page



Jerry Honard treats eggs under watchful eye of Bob Brown, Chief of PFC's Cooperative Nursery Branch.



Eggs are removed from jars and placed on trays in spring stream bed for hatching. Simple? It works too!



Lake Run Rainbow Trout fry which were hatched in the spring's stream bed will be transferred to raceways like the one shown below for rearing to fingerling size.

the influence of lively Lake Erie.

The 3-C-U association really needs no introduction, having been featured in the *Angler* in December, 1969, and certainly the sportsmen of the Erie region are aware of its value and efforts.

The group first formed in 1966 when a number of sportsmen felt it necessary to do something about the quality of Lake Erie fishing. First nursery site approved to enhance the lake run rainbow fishing was a spring tributary to Trout Run. The Fish Commission had no stock of lake run rainbows so permission was given the club to seine fry from the stream. As a result about 600 7-8" trout were stocked the following spring and the program was underway.

The following year, in addition to

C-U clubs stocked a total of 69,445 fish for the 1970-71 fiscal year. About 50,000 of these were lake run rainbows raised from the egg stage by the cooperative nursery workers. Another 12 thousand plus were coho salmon. The balance of the fish were browns and brooks stocked in inland waters not tributary to the lake. Fish are tagged or fin-clipped each year for identification, checks on migration, and other useful data.

The name? It is a bit unusual—actually it is a combination of letters from a number of supporting clubs that form the association. Originally it included the Erie County Sportsmen League, the Gem City Outdoorsmen Club, the Wesleyville Conservation Club, and Trout Unlimited. In 1969, the Northeast Hunting and

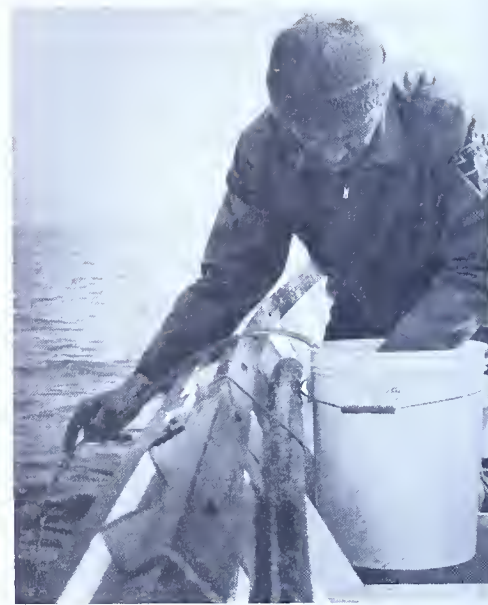




A new 3-C-U venture was the stocking of walleye eggs in Lake Erie. Above, Jerry Honard primes the siphon to start the flow of the first of 500,000 "eyed" eggs obtained from the Fish Commission's Linesville Station.



The eggs, measuring a scant $\frac{3}{32}$ of an inch in diameter, are about ready to hatch and will someday add to the existing walleye fishery at Lake Erie. Additional eggs were retained ashore for hatching and rearing to fingerling size before planting.



From the "PAMELLA," a 22 foot dory built by Dan Wilson, the eggs were gently siphoned into Erie's depths about a mile offshore. After sinking to the bottom of the lake they will be practically invisible until they hatch. Photos on this page courtesy of the Cosmopolite-Herald, Girard, Pa.

CO-OP Special

continued from preceding page

original stream, incidentally, but one several miles away—a biological fact discovered in the early days of the Erie cooperative.

This fish was the prize of the fisherman, but others of her kind were electro-shocked farther upstream by Hetz and members of the Fish Commission. Eggs were extruded and a suitable male was recovered and his milt placed in a coffee can—the sim-

ple ways are the 3-C-U's effective ways. The eggs and sperm were mixed, allowed to "harden," and were eventually placed in the Rupert Spring hatchery. These particular eggs are now out of the fry stage and well into healthy fingerling rainbows at one of several 3-C-U rearing locations.

Next spring the trout will crowd the lower end of the raceways, as will the young coho salmon—ready for their run to the lake. A plank will be removed, a screen lifted, and the young trout will be on their own to

find their natural way through the tributary and out into Lake Erie to develop and return to repeat the cycle and to supply the angler with exceptional sport. Their growth will be phenomenal—more than doubling their length and several times their young weight in a year's time on the bountiful forage fish in the lake. And the single fisherman will return to the jetty with others of his kind, too, to fish for the silver trout and the vibrant salmon with more assurance that his part of the cycle will be repeated again and again.

Keystone Camping

continued from page 23

esta, Tionesta to Hunter Bridge, or Island Park just below Hunter Bridge to President. Islands along the river make overnight boat camping a distinct possibility and such trips may be extended along longer stretches of the river for a week's journey or more if the boater desires. An outfitter's group at Clarendon has canoes and other rigs available for such trips. I have traveled the river by boat from Franklin to Kinzua Dam and cannot recommend any one area as being more beautiful than the other.

My fishing with artificials has been haphazardly effective on almost any stretch of the stream. Strikes may come in bunches, then no action for a period which might be followed by quick successive strikes in another

area. I caught my biggest walleye in the Cloverleaf Eddy where I also saw a shore fisherman practically pass out one day while landing a 14 inch bass. The gasping angler explained breathlessly that a huge muskellunge took a pass at and tried to swallow his bass! Muskellunge are often caught this way in the Allegheny and many fishermen can attest to the fact that a "lunge" went after another fish they were hauling in.

Klinestivers, at the west end of the Tidioute Bridge and Lud Haller's in Tionesta, are top sources of information for the interested camper or float fisherman. Tidioute is also the site of the annual Pennsylvania Fishing Tournament held on the Allegheny River, usually the end of September or first weekend of October, with anyone in the state welcome to join in the two-day event. If the

camper loves to hide himself in the big woods, Hearts Content with stands of historic trees is a nearby National Campsite in the big woods east of Tidioute, along Pa. 337.

The camping angler may have success on big muskies and other game fish with whopper sized jitterbugs in black color, repalas and rebels of all types, surface mouse, underwater river runts and Phillips killers. For fly fishermen, deer hair bugs and vari-sized muddlers are effective.

Black and purple plastic worms and jigs are also outstanding, with jigs most effective late in the year.

Probably the best baits if the camper can get them past his wife and into the camping refrigerator are soft crabs and hellgrammites. I use an unusually limber ultra-light spinning rod with a small reel and the bass have a circus flinging my lures.

BOATING

Questions & Answers

by Capt. Jack Ross

From K. C., Downington:

"I recently purchased a 1965 Evinrude outboard motor, Model No. 40352D. Could you tell me what the proper fuel-oil mixture is for this engine, and how can I test the generator since the battery will not keep a charge?"

—First off, this engine is a 1963 model, and it does not have a generator. You will have to use a battery charger as needed to replace the energy used in starting, probably about every two or three weeks. The proper fuel mixture is 24:1, or one quart in a six-gallon tank.



From J. E., Camp Hill:

"My ten-year-old outboard motor still runs fine, except that it cuts out occasionally when running at full speed. The engine has been checked by a dealer, and he says there is nothing wrong with it. What do you suggest?"

—Try a new fuel hose from the tank to the engine. Your original hose may be collapsing inside under the high vacuum required at full speed fuel flows, or the fittings may be allowing air to enter, thus decreasing the amount of fuel reaching the carburetor. The type of problem you describe is very difficult for a repairman to find, since he usually tests the engine in his shop with his own tank and hose.



From R. T. M., Kittanning:

"The gas tank in my day cruiser is 14 inches in diameter and 34 inches long: how can I mark a dipstick to read in gallons?"

—Calculating volumes for various levels in horizontal cylindrical tanks is a long and tedious process, but I can offer a shortcut applicable to all tanks of this type. The following table gives the percentage of full capacity for any given percentage of depth:

Liquid Depth

10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Volume

16%
25%
34%
42%
50%
58%
66%
75%
84%
100%

The total volume of your tank is figured by multiplying the area of the end times the length and dividing by 231, the number of cubic inches in a gallon:

$$3.14 \times 7 \times 7 \times 34 = 22.6 \text{ gallons.}$$

231

Estimating from the table, your dipstick could be marked this way:

$$2\text{-}11/16 \text{ inches} = 5 \text{ gallons}$$

$$6\text{-}1/16 \text{ inches} = 10 \text{ gallons}$$

$$9\text{-}13/16 \text{ inches} = 15 \text{ gallons}$$



From L. V., Pittsburgh:

"My 14-foot fiberglass runabout has a double bottom, and I need to repair a hole in the hull where it is impossible to get at the inside. How can I make this repair?"

—Trim the hole to an oblong shape, then cut a piece of hardboard or thin plywood an inch larger all around than the hole. Drill two holes in the backup board and insert a length of strong twine. You will be able to insert the backing board into the hole by turning it so that the narrow dimension of the board fits through the long dimension of the hole. Run a length of wood across the hole on the outside, blocking it out from the hull, then fasten the twine to the wood, pulling the backing up tight against the inside of the hull. After the first few layers of cloth and resin have been applied, cut the twine off flush and finish the patch, leaving the backup piece cemented on the inside.

From M. R. S., Scranton:

"I recently purchased a 'Fish-Finder' instrument which also measures the depth of the water. It seems to work all right as a depth indicator when the boat is running at slow speeds, but does not give good readings when running fast; also, it does not seem to find any fish. What can I do about this?"

—Nearly any depthsounder will give erratic readings at high hull speed, due to the turbulence of the water around the transducer on the bottom of the boat. The instrument's capabilities as a fish locator are questionable, since it would have to be a very large single fish or a closely packed school of smaller ones to give a reading. Try anchoring the boat and letting the fish find you.

SEARCH FOR Lost Boats Continues-

Pennsylvania's pleasure boat registration system will be used to help individuals locate boats lost in the June flood. If you lost a boat, contact your District Waterways Patrolman (his name, address and telephone number appear in both your pamphlet of Pleasure Boating Requirements and your Summary of Fishing Regulations and Laws), and give him as much information as you can—registration number, make and type of boat, serial number of the hull and motor.

Similarly, if you found a boat, you can use the same procedure in getting it back to its rightful owner. The "FINDERS-KEEPERS" philosophy does not apply to lost boats.

"LARENCY"? Really now!

In our haste to make up for time lost due to Hurricane Agnes, both the printer and your editor were forced to dispense with certain areas of proof reading in order to get your August ANGLER to you on time. Thus, LARCENY came to you as "LARENCY." Sorry about that!

FISH TALES

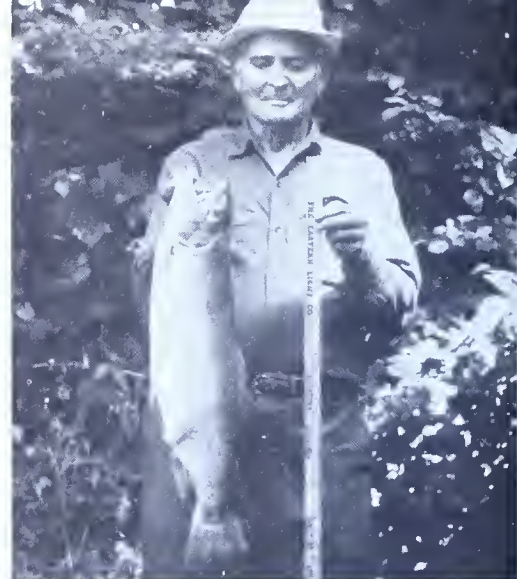
by Doris Katsonis



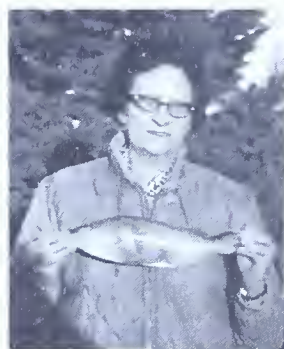
TIM SMALL of Beaver Falls had a good day while fishing Presque Isle Bay last October. Here he shows a nice stringer of bass and the big one—a 48 inch, 27 pound, musky.



This happy fisherman, JOHN KURRELL, JR., age 14, of Sunbury, holds the 11 inch rock bass he caught from the Susquehanna River using a spin casting rod and a worm for bait.



This beautiful 27¼ inch, 8½ pound, rainbow trout was caught by ARTHUR DITCH of Allentown last July. He was fishing the Little Lehigh Creek and it took a worm.



Eight year old BRAD BAUSERMAN holds the 14 inch brook trout caught from a pond in Clinton Co., while ISABELLE DRURY of Charleroi holds the yellow perch she caught from the Youghiogheny River and JOHN GREGORIS (right) caught his fat perch on a tip-up last winter from Sawkill Pond in Pike Co.



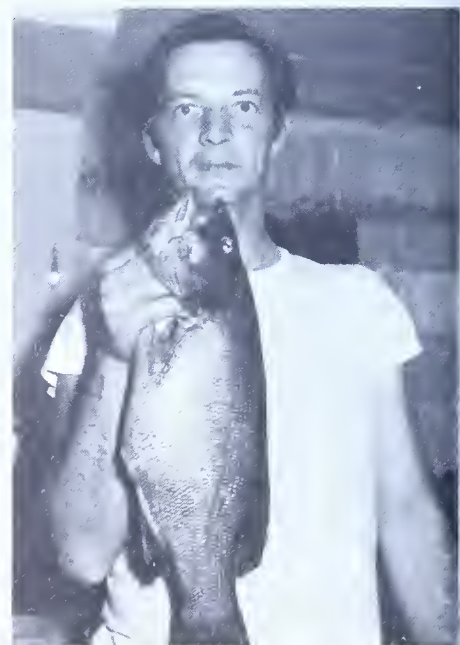
A McConnellsburg youth, JAMES KOEHLER, proudly holds his nice brown trout taken on a nightcrawler from Licking Creek last June, while MYRNA WINAND displays the big 38¼ inch northern pike she landed from Lake Marburg last May. It took a minnow.



A coho fisherman, MIKE COYLE, proudly holds the nice 25 inch, 5¼ pound, specimen he caught while surf fishing near Trout Run at Erie. Mike hails from Philadelphia and made the trip last November.



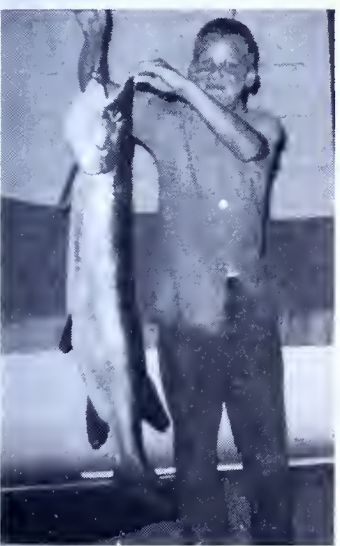
JAMES GABELLI of Erie was fishing with spinning gear and a homemade jig when he landed this 30¼ inch walleye from French Creek in Erie County last November. It weighed 9 pounds.



This nice 21 inch smallmouth bass was caught by JAMES WALLEE of Harwick last October. He was fishing the Allegheny River using spinning gear and a minnow.



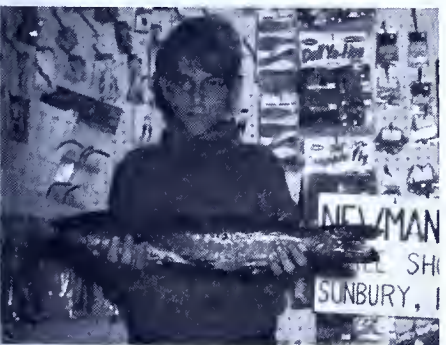
ROBERT FRY, above, of Sunbury holds the 31 inch walleye he caught from the Allegheny at Tionesta on a homemade jig, while STEVE MONTARSI of Lock Haven holds the large brown trout caught from a non-stocked stream in Clinton Co. using the fly rod, for the first time, that he won in fly tying school.



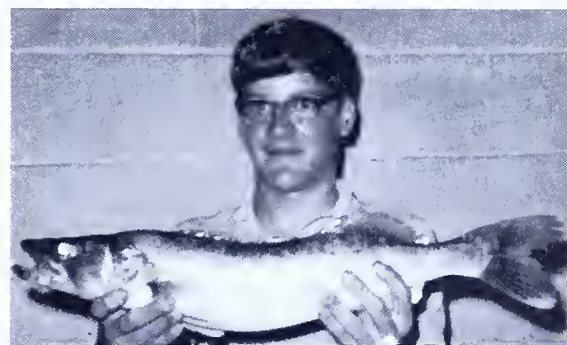
Young CARL McGARY of Cheswick holds the 40 inch musky he landed from the Allegheny at Freeport while trolling with a flat fish. ALFRED MARTIN of Houtzdale, right, holds the 21 1/4 inch smallmouth bass taken from Tionesta Creek last October.



EDWARD CALIGUIRE, a Pittsburgh policeman, caught his 33 inch brown trout while fishing at Kinzua Dam and HAROLD McELHATTEN of Warren, right, caught his big 45 1/2 inch musky with spinning gear and a live chub from the Allegheny.



JIM AUMAN of Sunbury holds his 21 inch channel catfish which he caught using a hellgrammite with spin casting rod. He was fishing the Susquehanna near his home.



DALE McGARY holds the 24 inch walleye he caught while trolling the same day little brother CARL, above, caught his big musky. Grandpa sends the ANGLER to them as a gift and took these pictures. Great Grandpa!



Another successful musky fisherman, CHARLES SNYDER, JR. of Hummelstown, holds his big 46 incher taken from the Susquehanna at Falmouth. It hit a yellow bucktail.



RANDY SEELY, 8, of Canton holds the yellow perch he caught on a tip-up from Lake Nephawin, while EDWARD BLISS of Spring City, right, holds the smallmouth bass he caught from his favorite spot, Dyers Quarry in Berks Co.



Little DOROTHY KOTH of New Cumberland caught her pretty rainbow from the Yellow Breeches using spinning gear and a nightcrawler, and LARRY CLAWSON, right, of Blairsville caught his largemouth in Indiana Co. on a black artificial worm.



Fishing Outlook

continued from page 3

Head." There are a few boats for rent here. Just downstream is the Pennsylvania Fish Commission access at Wysox.

From the Commission ramp downstream there is a small dirt ramp at the Wysox bridge. Below, at Echo Beach, boats can be rented and there is a private boat ramp. Next area down is called the Standing Stone pool, so named because of the huge boulder, at least 15 feet high, that stands upright near the water's edge

on the west shore. This is just below the Bradford County Boating club access where free access is provided for fishermen. A fee is charged for pleasure boating.

History tells us that back in the early 1790's, Marie Antoinette, Queen of France was in trouble with her court. A group of her loyal followers came to this section of Bradford County. They bought the land along the river and built a village with suitable quarters for their queen, intending to spirit her out of France to safety. Unfortunately Queen Marie had a fateful meeting with "Madame Guillotine" in 1793!

At Homets Ferry, downstream, a dirt ramp provides access. The Fish Commission ramp at Terrytown, just below, provides access to a good pool and is another fall favorite. Just above the bridge at Wyalusing is another good deep hole. A fine float trip can be made from the Terrytown Ramp down to a private access ramp in Wyoming County at the Rocky Forest launch, about a 6 mile trip.

Gary Stair's place, about one-half mile below the bridge, has bait for sale and some boats to rent. This covers the entire stretch and from what it looks like, it's a nice place to be when the cool weather sets in.

OUTDOOR EDUCATION

"on Location"

by Steve Ulsh

Education & Training Officer

Each year Fish Commission personnel participate in many types of educational programs. These vary from fishing and boating schools, slide and film presentations, to lectures and demonstrations.

A type of educational effort, which is gaining wider acceptance by school districts in Pennsylvania, is that dealing with outdoor education.

The program pictured on these pages is an example of the trend and shows the Fish Commission's effort to assist.

This particular program was initiated two years ago by Mr. Edward Schick Assistant Elementary School Supervisor for Cranberry Area School District.

The Fish Commission along with other State agencies participated in many varied phases from pre-planning and staffing to the actual teaching of the children.

Some of the areas covered were water ecology, fishing techniques, boating safety and pollution. Every effort was made to have the children participate physically by touching, handling and manipulating various items of equipment, aquatic specimens and pollution samples.

The current belief in outdoor education is to get the child out of the classroom and into the field. The Fish Commission readily agrees and pledges its assistance in these efforts.

(Right) The author gives an astounded trio a close-up look at one of the mounted specimens used in the Conservation Camp outdoor education program held at Camp Hoffman. (Below) Stan Paulakovich, our roving "FISHING OUTLOOK" columnist, is liable to show up most anywhere. He was on hand to demonstrate fishing technique and from the size of that lure—musky fishing was the topic!



TAKING A CLOSER LOOK

by Tom Fegely

Turtles of Pennsylvania

Several summers ago I watched a lone angler wormfish a small rocky pool in Loyalsock Creek in Sullivan county. Within a period of fifteen minutes he caught and released two turtles. In disgust he moved on.

Out of curiosity I decided to give it a try. Before long I felt a solid tug and hauled in a reluctant, six-inch long Painted Turtle. While removing the hook from its jaw I noticed two other fresh wounds. Evidently this same turtle attempted "robbery" and was caught three times within a half hour.

Appropriately named, the Painted Turtle has a shell bordered with red and a deep yellow plastron (under-shell). Since it eats only when submerged, baited hooks offer "easy pickin's" for this aquatic reptile. Young frogs and toads, insects, plants and small fish make up the normal menu of most Painted Turtles. Popular as pets, they may live for ten years or more.

Pennsylvania woods and waters are inhabited by a dozen or so different species of turtles, some local in distribution and others present statewide. Most live in or near water and

play an inconspicuous but important role in the ecology of any pond, lake or stream.

In early fall most turtles burrow into the bottom mud where they hibernate until March. Their inactivity along with the decrease in metabolism, respiration and heart-beat enable them to survive on oxygen absorbed through the skin. Stored up fat serves as nourishment.

All turtles reproduce by laying eggs which they bury on land. Typically two to six leathery eggs make up a clutch. They receive no protection except a covering of soil or organic debris. Marauding skunks and racoons frequently destroy the shoreline nests during their nightly wanderings. Those that do hatch must face herons, crows, and even large fish before growing to a size sufficient to defend themselves.

OTHER COMMON TURTLES

The Spotted Turtle, black with yellow spots across its head, neck and shell, is often seen basking on logs or rocks in ponds and slow-moving streams. Although they compete with fish for food, Spotted Turtles seldom prey upon fish. Laboratory tests involving a maze show that this species is probably the most intelligent of all turtles. Like its painted cousin, it eats only while submerged and is easy to keep in captivity. Its forty year life-

span is indeed unique among small turtles.

My favorite aquarium turtle is the Musk Turtle or "Stinkpot". Since it rarely leaves the water (wild or captive) there is no need for provisions other than a full tank. The "Stinkpot" gets its name from the skunklike odor it emits in times of danger. The rounded shell and two yellow stripes on either side of the head readily identify this shelled scavenger. Besides dead animals it happens to find it is known to eat fish and destroy fish nests. It is interesting to note that a single mating may produce fertile eggs for three or four years. Musk Turtles frequently live for two decades or more.

Other aquatic turtles with limited ranges in Pennsylvania include the Map Turtle (Erie and Susquehanna drainage), Mud, Red-Bellied and Bog Turtles (lower Delaware drainage), the Spiny Softshell (Ohio and Lake Erie drainage) and Blanding's Turtle (Lake Erie).

The predominantly terrestrial Box Turtle spends some time soaking in mud holes on hot summer days and occasionally wanders into a stream. Wood Turtles, on the other hand, may spend equal time on both land and in the water. Mushrooms and berries lure them into meadows and woods during the summer but spring and fall find them feeding on aquatic life.

Whether you're a "Turtle watcher" or not, their presence in Pennsylvania waters adds interest to an angler's day and fills an influential niche in the ecosystem of any aquatic habitat.

◀ 1. The spotted turtle is extremely wary and will dive from its log perch at the first sign of alarm.

2. The stinkpot is frequently mistaken for a small snapping turtle. It has the ability to strip a hook of bait without jerking the line. ▶

◀ 3. Western Pennsylvanians will find the Midland Painted Turtle frequenting their waters while the Eastern Painted Turtle lives in the East. In the Central part of the state these two sub-species tend to interbreed. The physical appearances of the three varieties are very much alike.

4. The wood turtle is readily identified by its sculptured shell and the black blotches of each shield of the yellow lower shell. Pleistocene fossil remains shows that it has inhabited the Keystone State for many thousands of years. ▶



*“Train up a child
in the way he should go . . .*



Proverbs 22:6

*and when he is old
he will not depart from it”*

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child's training than fishing . . .
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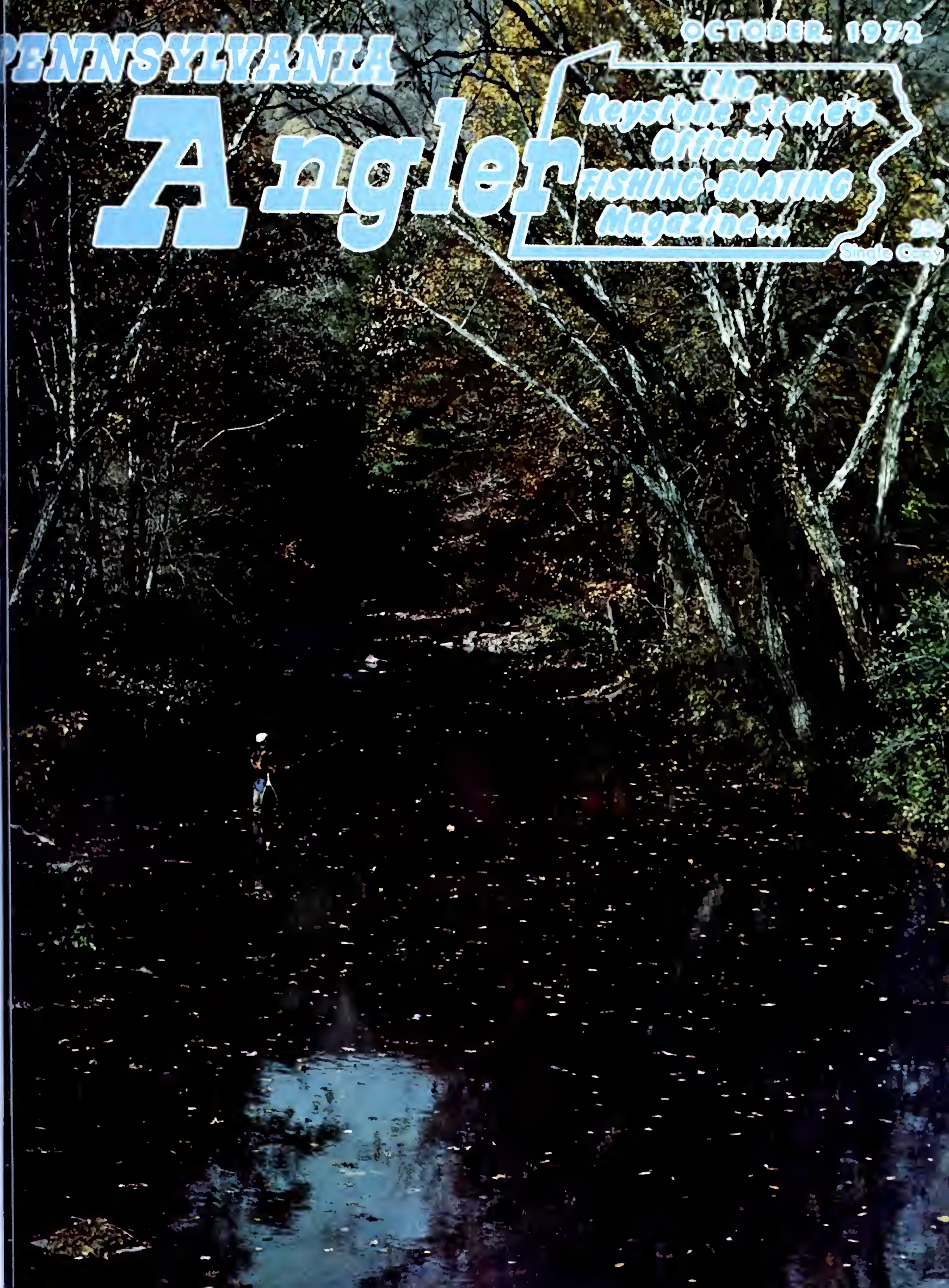
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OCTOBER, 1972

Angler

The
Keystone State's
Official
FISHING-BOATING
Magazine...

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“AFTERMATH”

As the flood waters that accompanied Hurricane Agnes were receding, we predicted that the clean-up operations to follow would have adverse, far-reaching consequences. As predicted, many of our streams have suffered more damage, *since the flood*, than was caused by the flood!

In those cases where the Corps of Engineers, operating under a “mission assignment” from the Federal Office of Emergency Preparedness took inspection teams into the areas, we were able to have our Waterways Patrolmen accompany the teams and preclude serious damage.

However, our greatest problems have come from local municipalities operating under the conditions of “Disaster Emergency.” Taking advantage of the waiver of the permit ordinarily needed for such operations, many Township Supervisors and borough officials contracted to have bulldozers remove not only the debris that could have caused serious problems with recurring high water but they have converted fifty-foot wide streambeds into 100-foot-wide flat ditches. The only way a fish could ever traverse these streams would be lying on its side! Miles and miles of our prime trout streams have been reduced to straight, wide, shallow, featureless ditches with high unnatural dikes substituted for banks. Stone, shale and gravel, taken from the streambeds, has been piled six to eight feet above the original stream banks.

There are so many of these projects started without notice that our *Thin Green Line* cannot possibly get to each one in time. Even in cases when they can, they are still unable to stop these degradations. Most sportsmen have some knowledge of a stream clearance locally but the magnitude of this clean-up operation throughout the Commonwealth is staggering! Just a week ago we were given 2,700 projects to review! These were from municipalities asking for permits.

In desperation we have asked for an agreement with Dr. Goddard and Delegation of authority for the administration and enforcement of the Act of June 25, 1913, P.L. 555 (The Water Obstruction Act). In this delegation of authority, the Fish Commission is made an agent of the Department of Environmental Resources to assist that department, by issuing “Cease and Desist” orders, where activities are obviously far and above those necessary to clear streams of obstructions deposited by the flood waters.

But, in the meantime, beautiful streams have been raped! Portage Creek, Kettle Creek, Beaver Run, Asaph Run, Straight Run, Tioga Creek and Loyalsock Creek, to name a few. Miles and miles of these beautiful streams have been irreparably damaged. And even where DER has ordered the violators to take corrective action, we cannot expect that *man* will be able to duplicate God’s handiwork in the restoration.

At the same time, the *dam builders* are having their day and by “*transferring*” Hurricane Agnes to any watershed, albeit relatively unaffected by the flood, they consider the devastation that *could have occurred . . .* and the drawing boards are overflowing.

These are sorry days for the streams of Pennsylvania. All we can do is try our best to see that reason prevails.

Executive Director
RALPH W. ABELE



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STATEWIDE with the EDITOR

ON THE COVER, beautiful Clarks Creek, just a stone's throw from downtown Harrisburg, photographed by the Editor on a warm day last October. The tranquility which seems to prevail in the photo was shattered last June when flood waters left established channels, leveled three homes within 200 yards of the scene on the cover and literally wiped out the Dauphin County Anglers & Conservationists Cooperative Nursery just a short hop downstream.

"The Ol' Fishing Hole ain't where it used to be," is the chorus heard up and down the rivers and streams of the Commonwealth where AGNES did her dirty work. What used to be but a bend in Clarks Creek looked like a good sized farm pond while the waters were still running high and murky. Where trees once stood, there are no trees . . . and elsewhere we have trees, not necessarily standing, but we have trees!

The Susquehanna River has under-

gone a shift in scenery. Gravel bars can be seen where none ever existed. It's going to be a chore locating favorite holes for our Fall small-mouth fishing!

The drive to work each morning gives me a glimpse of about three miles of Stoney Creek. Normally it's a gently flowing stream and with the exception of small dams here and there, it can be considered relatively shallow. "Aggy" put the stream over the banks and up to the kitchen ceiling in many of the streamside homes. In the process, the personal treasures of the residents (alike so many thousands throughout the state) were washed away . . . some, undoubtedly, clear down to the Chesapeake Bay.

Fortunately, a tremendous volunteer army, together with Civil Defense, The American Red Cross, State and Federal agencies stepped in to lend a hand with "Operation Recovery" as soon as flood waters receded and many families have since returned to at least a semblance of normal living.

However, those "priceless posses-

sions" washed away from their original owners (I'm thinking of that \$69.95 mattress I saw hanging in a tree—ten feet above the water) have now become the sportsmen's plague.

From our vantage point here, it's been apparent that PENNSYLVANIA ANGLERS have been taking the initiative to clean up streamside messes—regardless of "Whodunnit?" Their progress has been admirable.

But what now? Many tons of debris will forever grace our favorite flat stretches . . . unless a concerted effort on the part of sportsmen is made to clean it up. The photos on this page are representative of hundreds of miles of Pennsylvania's waterways.

Talk it up in your club meetings. Make a section of some stream A Club Project.

Sportsmen! Boy Scouts!

Accept the challenge!

Let's make Pennsylvania beautiful once again.

The fish? They made out best of all!





FISHING OUTLOOK

By.. Stan Paulakovich

Tionesta Lake nestles like a jewel amid the majestic Alleghenies in Western Forest County. Most of it is within the National Forest Park area. At this time of the year the grandeur of the mountains with their constantly changing color scheme is worthy of a trip, just to look. The name Tionesta is said to be taken from the Indian language and means, "Home of the Wolves."

The reservoir, completed in 1941, was designed primarily for flood control purposes. Much foresight and planning went into the recreational potential of the lake and today it offers great fishing, boating, camping, picnicking and hunting to the thousands who use it annually.

On October 4, 1964, Joe Sabat, of Springdale caught a nice 52½ inch Musky in this lake that weighed 38 pounds. Joe hooked into this fish while employing his favorite method of fishing—skipping frogs. Since that time, although many, many hundreds of Muskies have been taken out of the lake, that particular one still holds the record for that body of water. Certainly since Musky were native to the area and with supplemental stockings of fry and fingerling, there must be bigger ones than that around.

The lake is located just outside of the town of Tionesta, near Rte. 36. It covers 480 acres while at normal summer pool. From the breast upstream it winds and twists for 6.3 miles to the Nebraska Bridge on Leg. 27008. Generally narrow, the width

does not exceed one half mile at any point. Deepest parts in the lake are 37 feet, with an overall average of 20 feet. Two boat launching areas are available. One is one-half mile upstream on the left bank and the other at the Nebraska Bridge, making the entire lake easily accessible.

Water levels are maintained in the lake by discharges through a tunnel 19 feet in diameter which empties into Tionesta Creek. From the tunnel it is 1¼ miles to the junction with the Allegheny River. This stretch of stream has a good musky population, verified by WWP Kopena and Biologist Ron Lee in an electro-shocking and tagging experiment that was carried on last fall. Among the many Musky that were tagged and released was one that measured 43 inches. This same fish was caught this May and measured 46 inches!

This stretch of stream is also the home of Lud Haller's legendary "Old Grandpap". (See Fishing Outlook-October 1971) In April of this year, workers at the reservoir had sealed off the discharge into the tunnel for inspection and to clean up some of the debris inside. Water just trickled through the recessed troughs. Midway in the tunnel, one huge Musky

had thrashed and thrown itself around until it was stranded across the troughs in water just several inches deep. The fellows gently guided this fish down through the tunnel in the troughs to the pool below. Later on the width of those troughs were measured and the fish had spanned a distance of 60 inches, with a good 6 inches still overlapping! Alive and well, mean, moody and cantankerous, "Old Grandpap" lies somewhere in this stretch—waiting to tear up the tackle of any one fortunate enough to hook into him.

During the course of the year, actual counts by our working force, data from fishermen, information from sporting goods store owners, among them Lud Haller, who sponsors an annual contest, and accounts from local sportswriters tell us that about 200 legal Musky are taken at Tionesta each and every year. Most Musky-ites who fish Tionesta each year are trollers. They generally start down near the trash bar, ¼ mile above the breast and work the shoreline up to near the Nebraska bridge and then down the other side. Most of them troll fast—as fast as you can go and still have your lure work properly. Lures that run from one to three feet under the surface are local favorites. Only 60 to 75 feet of line is used in trolling, Musky will sometimes hit right back of the boat in the wake. Best lures over the years have been the floating River Runt in the shad finish, the Rapala

continued on page 29

BELOW LEFT is an angler taking one last cast on Tionesta Lake before calling it quits . . . in this area you've got to "THINK BIG"—notice the size of the landing net! Adequate boat launching facilities are available on Tionesta Lake, BELOW RIGHT, with plenty of parking space as well.





"SPORT"

Dear Mr. Abele,

Very rarely do I ever take the time to write any letters, but I do feel I must write you and the members of the Pennsylvania Fish Commission to express my appreciation for the refreshing trend toward quality fishing and a little less emphasis on strictly "put and take."

Nowhere is it more evident than right here in the central Pennsylvania area where the fish for fun areas such as those on Falling Spring, Yellow Breeches and the Letort are providing excellent trout fishing all the year through.

The results of these projects are most obvious on the newly established area on the Letort, where over the past few years the fishing was, at best, "fair." However, under the new regulations, there have been many trout in the 4 to 6 inch class caught and released this year, and the surface activity has greatly increased. These native born huskies should provide some of the best fishing in the *Nation* in the next few years, now that they have a chance to reach maturity.

These new regulations, plus the many man hours of stream improvement being done by some of the local sportsmen will definitely make the Letort a top notch stream once again.

L. D. TATERUS

New Cumberland, Pa.

P.S. A fisherman can never write a letter to the Fish Commission without making at least one suggestion; here's mine. Why not change the "Fish for Fun" designation to "Sport Fishing Areas", because any fisherman who fishes an area and knows he's got to release anything under 20 inches has definitely got to be a *SPORT*.

IT TOOK A LONG TIME

Thank you, as individual men and as a Commission, for the whole new world of pleasure and excitement that is mine and to share.

Bought my first license in 1971 after retiring and as I learn to fish and enjoy the many lakes, dams and

streams of this great state, I am filled with pride and thankfulness for the lives of the many men, through the years, who have made this possible.

We live in a time when men's hearts and minds are burdened down with worry, fear, indecision and hate. But there is no better relief than to get on the business end of a fishing rod, watch the tip or the bobber, look out over the blue expanse of a beautiful water—land a nice fish and thank God *man does belong*, was not created just to be expendable, but to enjoy these things, all his life.

Why was I so dumb to wait until I was 62 to start? Sure could have used some relaxation many times along the way.

Again, thank you.

DON WALTERS, Lewistown

At any rate Don, you're enjoying it now and that's what counts most of all! Ed.

NO SUCH PERSON!

Just received my third edition to the Pennsylvania Angler. It's a great magazine.

I am very interested in the course that "Lena" took on the *FUNDamentals of Fishing*.

Just found out how I love fresh water fishing. Really, I wish I would have done it 20 years ago. But, like Lena, I am dumb at the sport.

Please help a guy out. Thanking you in advance.

An also dumb fisherman

RICHARD MCKNIGHT, Philadelphia

We take a very dim view of anyone calling *OUR* fishermen "dumb," Dick! Give WWP Frank Schilling a call—find out when he has a course scheduled. His number is 331-3514. Ed.

MORE CAMPING—

May I thank you for the good work that you have done and for the great joy that you have given our family by all the fishing programs that you people have set up. For almost two years now we have been getting the Pennsylvania Angler and not only do we enjoy the fishing articles but I enjoy the camping news also. I hope that in the near future you will be able to put more in it about camping and camping areas in the state. We have a lot to be thankful for and a lot to do in Pennsylvania. Keep up the good work and thank you for all you have done.

W. W. WEIDENMANN, Philadelphia

MISSED SOMETHING!

I recently read the May 1972 issue of the Pennsylvania Angler, which I bought at Haller's in Tionesta on my way back from fishing Brokenstraw Creek in Warren County. (I caught 8 nice rainbows).

Although I had been a licensed fisherman in Pennsylvania for 19 years as a resident, it was the first time I had read the Pennsylvania Angler.

It was apparent from the start, that I have missed some darned good reading over the years!

Please accept my check in the amount of \$5.00 for a three-year subscription.

HERBERT J. SOLIDA, Crestline, Ohio

If you insist Herb! Tell your friends in Crestline about the Angler. Ed.



IF ONLY THEY KNEW!

I wrote a letter to State Waterways Patrolman Gerald T. Crayton in Oakmont for some local Pittsburgh area information about fishing. Well, Patrolman Crayton sent me a load of information that he had on hand, much more than I asked for, which I think was very nice of him.

First, may I say if the cost of handling and mailing is not too high, I think a green pamphlet titled "The Pennsylvania Fish Commission—Its History, Organization and Duties", 7 page booklet, should be sent along with each fishing license. There would not be one person complaining about the license cost of \$5.00 a year for all the good fishing we have in this state, after they knew all that was being done with that \$5.00. It's well spent and the fishing is getting better each year.

WILLIAM SHELDON, Pittsburgh, Pa.

We're so happy you noticed Bill! Thanks. Ed.

TOCKS ISLAND—

I want to wholeheartedly support Executive Director Abele's comments on "Tocks Island Dam" in the June 1972 issue of the Angler.

I can see only deterioration of fishing potential and destruction of the identity of the Delaware River by construction of this project. The greatest advantage that I can envision is a mecca for speed boating. I don't think the peaceful valley needs this.

I can't quarrel with development of recreational facilities so long as the basic environmental character is preserved. In other words, I don't want to see a Coney Island developed in the Delaware Valley by the use of my tax dollars.

J. E. PITTENGER
(Former Milford Resident)

THANKS J.E.—we needed that!

\$100.00 PLEASURE—

I have enjoyed fishing in Pennsylvania since I was 10 years old and am now 44 and fish approximately 12 hours per week. My subscription for another three years of enjoyable reading is enclosed.

My boys Kevin and Billy go with me much of the time. I know they will grow up to be good sportsmen and fishermen. I love to teach them of the great pleasure of fishing.

WILLIAM MARCH, Dillsburg

P. S. If the price of a license was \$100. it would not be too much for the pleasure I get from fishing.

GOOD NEIGHBOR!

Although I am only 14 years old, I am an avid angler and your magazine tends to satisfy my hunger for the outdoors on the days when I'm not fortunate enough to get out and fish. Your articles are the most enjoyable and informative of any outdoor magazine. Although the boating articles are not very interesting to me, since we don't own a boat, I read them anyway in the hope that I might learn a few things.

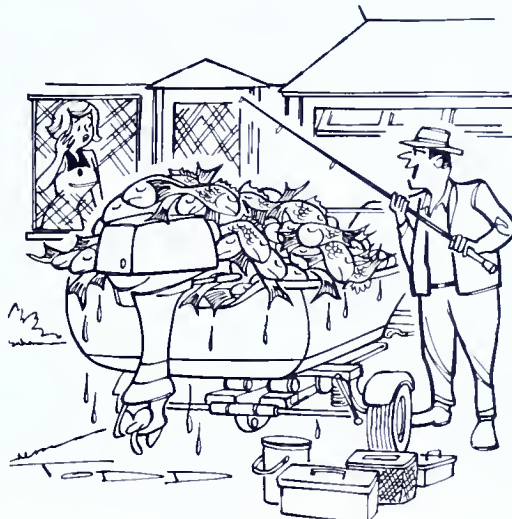
My father and brothers also read my magazine, since they are also fishermen, and I believe they enjoy Pennsylvania Angler as much as I do. I especially enjoy the *Notes from the Streams* section, as they give a broad outlook on the fishing situation in Pennsylvania in general. Although all of our fishing is done in Mercer County at home, and Potter County

while on vacation, I read the other field notes as well.

My thanks and commendations to the Pennsylvania Fish Commission for the great angling in the Keystone State, and to the editors of Pennsylvania Angler for a very fine magazine. Keep up the good work!

JIM CRISAN, Masury, Ohio

We'll try Jim, we'll try! Editor"s"? I wonder where they went! Ed.



"NOTHING GOT AWAY!"

IN DEFENSE OF CARP—

I'm writing this letter to defend a fish I consider to be a game fish and deserving his reputation to be boosted from a pest to the hard-fighting, drag-squealing creature he is. This fish is the CARP. I caught my first carp, a 30-inch, 11 pound lunker in the Susquehanna near Falls, Pa. and I'd honestly say it was the hardest fighting fish I've ever caught and that includes pike and bass which I've also caught.

Could it be because he is a scavenger that so-called purists snub him in favor of their trout and bass or is it possible that they enjoyed hooking a carp but are ashamed to admit it? Well, I admit that *I like to catch carp* and will continue fishing for them! I consider any fish that fights, or is good to eat, worthwhile sport. I have respect for all fishes from the mighty muskies, pike and bass to the lowly eels, bluegills and carp. More anglers should fish for the carp because they are missing a lot of fun.

P. S. Keep up the articles on carp and other under-rated fish. Your magazine is the greatest!

JOSEPH COLBASSANI, JR.,
Scranton, Pa.

We're with you Joe! You heard the man, readers, give those carp a try! Ed.

A WHOPPER!

I have heard a lot of FISH STORIES in my time. Many on the weight, size and strength of the one that got away. BUT—the article on page 25 of the July issue of the Angler entitled "TROUT MOVEMENT STUDY" which says they tagged "500 year old fish" in Adams County has got to be the best one yet!

The Pennsylvania Fish Commission is doing a good job and the Angler is the best in many ways so I suppose it is only right that they get to tell the best FISH STORY.

I enjoy reading your magazine.

SUSAN STICHLER, Annville, Pa.

Stay with us Susan—next Spring we'll be stocking "2,000,000 year old trout!" Ed.

FAMILY FISHIN'S FUN—

Enclosed is my \$5.00 for another three years of the Angler. I know they will be as enjoyable as the last three. I enjoy your book very much—we are a fishing family. My husband and I go quite often with our children ages 10, 4 and 2¼ and they like to fish as much as I do.

MRS. PAUL E. BARLETT, Mercer, Pa.

FOLLOWS "THE BOOK"—

The Angler is the best book on fishing I have ever read. There are a few articles that I had lots of enjoyment reading such as (September '71) "The River Nobody Knows." I caught some big perch and crappie from 12 to 16 inches and have seen big largemouth bass taken there.

The other article (July '72) "Fishing Outlook" had the story on Pymatuning Lake. I go there nearly every week-end and have caught 10 to 15 white bass and crappie each time. I have also caught walleye and bass too.

Thanks for reading enjoyment and for giving me the knowledge of great fishing so close to home.

S. KAMINSKI, Pittsburgh

ONE "BEEF"

I've been a subscriber to the Pennsylvania Angler for a half year now and I find it a great magazine but have one "beef"—it is too quickly read. I wish there were more pages in it, more articles, etc.

J. BARCZAK, Erie

We're with you, but for the time being you'll have to read slower! Ed.

continued on page 26

THAT COHO CRAZE!

by Don Neal



It's not a sport, it's a mania! That's the reply I got from a fishing friend of mine, already experienced at the coho game from fishing in Michigan, when I asked him about the sport on its introduction to the waters of Lake Erie.

I didn't accept this as a legitimate answer at the time. But when the day came for me to take my first crack at angling for this *super-duper* species, I became a believer in record time!

Viewing the scene from the Walnut Creek station of the Pennsylvania Fish Commission, I quickly came to the conclusion that those fishermen standing waist deep in the thrashing whitecaps or perched perilously on spits of land extending into Lake Erie—as well as those in the boats that bobbed like discarded corks as far as the eye could see on the angry waters, just had to be crazy. The wind was harsh and cold, the sky overcast, and there was more than a slight hint that things were going to get worse before they got better.

Being a sane fisherman, I rationalized the situation and told my friends to go ahead and have their pleasures. I went back to the motel where it was warm and comfortable.

That was *before* I hooked into my first coho. Since that memorable day, no chill has been too chilly, no wind too windy, and the rougher the

water—the better I like it. In fact, if coho fishing were limited to the waters at the Arctic Circle, I would probably be mushing my dog team and sled in that direction this fall.

Yep, coho fishing does get to be a mania, *but it's sport too!*

Of course, the major problem in fishing for cohos is catching cohos. But they can be caught. And the boys who fish for them with true dedication, the regulars who have perfected their techniques to almost an exact science, do a whale of a job of it. Yet the lesser fisherman is not denied the pleasure of bringing an occasional trophy catch to net.

First, of course, is the matter of finding willing cohos in a lake the size of Erie. However, the “homing” instinct that draws the coho back to the tributary from which he entered the lake makes this a rather simple matter. The closer to actual spawning the closer the coho will be to the mouth of its tributary.

This movement in from the open lake can be noted among some of the more precocious males as early as July, with the general inward movement becoming quite noticeable by early September. At this time, because the fish have a habit of milling considerable distances off shore, trolling is the better method.

It is this method that has taken on the more pronounced aspects of the scientific approach. In addition to the

traditional fishing gear, the coho troller is most often equipped with an electronic fish-finding device, a “depth” thermometer, possibly a down-rigger, and a half-dozen personal lures which could include a well-fingered rabbit's foot. If a boat of considerable size wasn't needed to battle the lake's occasional nasty mood, it would be needed to carry the supplemental fishing equipment used by some.

It is from mid-September on through to freeze-up that the shore fishermen have their heyday. However, the angler who expects to find coho fishing conditions at Lake Erie

A wiggling Coho Salmon, freshly caught from the waters of Lake Erie, is held up by the gill while other anglers look on appreciatively. All photos—Joe Comstock



◀ Lot's of angling action will be found at the Walnut Creek jetty during the main Coho run at Lake Erie. Jetty serves the dual purpose of keeping the channel clear for boaters using the Walnut Creek Access launching ramps as well as providing a fishing pier for those who would rather fish from shore.

comparable to a mid-June afternoon on a typical trout stream is in for a disappointment. Weather on the lake can come close to being downright intolerable, but that's when the cohos strike best. And who cares about the weather when lunker cohos are crowding their way into the tributary streams, willing and ready to test the fisherman's skill?

Trolling for cohos on Lake Erie has disproved some Michigan theories, and so has the shoreline fishing. While Michigan anglers claim that the coho at spawning time is off its feed and hits only because of reflex action, Erie fishermen feel they have proved that cohos do feed, even as they enter the tributary to spawn. Therefore conventional lures are supplemented with live bait at times to good advantage.

And while Michigan fishermen have supported the idea that deep trolling pays the largest dividends, Erie fishermen are catching large numbers of cohos close to the surface, sometimes as the lure jumps from wave to wave.

This indicates that the coho is an unpredictable fish when it comes to striking. And for this reason, one will find a mixture of West Coast, Michigan, and local techniques and tackle being used by fishermen in the Erie area.

Trollers there are finding the most productive lures to be the cherry bobber spinner (a favorite of West Coast coho anglers), the herring dodger about 18 inches ahead of a streamer fly or live bait, a series of spinners trailing live bait or fly, flashers fished in the same manner, blade spinners with hair dressed hooks, or a jig or plug trolled about 15 to 20 feet behind a heavy sinker.

The shore fisherman has the choice of casting spoons, spinners, streamer flies, plugs, or live bait. Or of perching himself on the bank and casually fishing live bait or salmon egg sacks. While some persons have been known to make worthy catches on night-crawlers, the most consistent hit-producing bait is the salmon egg sack.

Any experienced coho fisherman knows that a book could be written



Waterways Patrolman Steve Shabbick weighs an angler's Coho. Enforcement personnel from every corner of the state assist with the annual "Coho Patrol" at Lake Erie.

in covering all aspects of fishing for this species but the novice coho fisherman in the Erie area can make it easy on himself by visiting the Walnut Creek Station of the Pennsylvania Fish Commission. Here, knowledgeable personnel are stationed to give advice and guide the visitor to the most likely fishing spots. Of course, there's excellent fishing to be had right there.

A little publicized possibility while fishing for coho in Lake Erie waters is the chance to hook into one of the record-size lake-run rainbow trout that share the coho range. While some really outstanding fishing for this species can be had throughout the winter and spring months, they are no stranger to the fall and early winter coho fishermen.

Long before coho were introduced to the lake, the 3 to 5-pound lake-run rainbows being caught in the lake's tributaries were "the sensation of the nation" as feature articles appeared in national sporting magazines. Now, according to Jim Carter, Waterways Patrolman and an ardent lake fisherman, the "runs" are heavier than they ever were before. And this past spring, while visiting the Erie area, I saw a number of rainbows in the 3 to 5-pound class in the headwaters of the tributaries as they made their way upstream to spawning beds.

And yet another bonus awaits this year's Lake Erie coho fisherman. For this is the year that chinooks, those hog-size salmon that were introduced in the tributaries three years ago as smolts, are expected to return for their spawning run. This is the salmon that West Coast fishermen supposedly throw back if they are under



Young Max Krone proudly displays one of Lake Erie's "lake-runs" Rainbow Trout. They are an added bonus at Erie—this one measured 27 1/4".

20 pounds. At least, that's what I've been told.

So just figure it out. Big fish, thrashing fish, fish with no other thought in mind than to go right back to the deepest part of the lake from whence they came putting an enormous strain on your brawn and tackle. Sport? Positively! But a real mania-producing experience once you've hooked into one of the brutes . . . take it from one who knows!

Bureau of Waterways patrol craft about to dock after another round on the Coho waters. The presence of this and other "Safety-Patrol" craft on the lake give Erie boaters an added margin of safety during the fall Coho run when waters can get high and wild on very short notice.

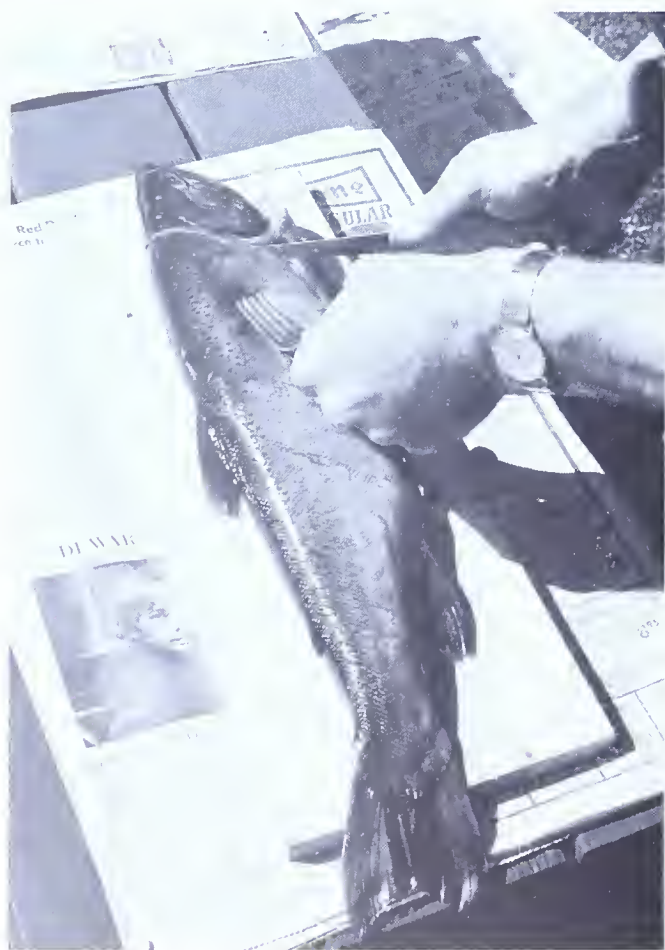


FILLET THOSE COHO



by Jim Bashline

photos by Sylvia Bashline



The easiest way to prepare any fish for the pan, freezer or smoker is to fillet it. The only possible exceptions would be small trout or smelt. The skin on anything larger does not add one thing to the flavor. With coho salmon this is especially true and if you want to sample some of the best fish in the world . . . first go to Lake Erie and catch a coho. Even if you can't get there or don't have the desire, this method of filleting will work with any other kind of fish except shad.

The Lake Erie coho have had a lot of bad copy written about them that leads fishermen to believe that they are not good to eat. Not only do they taste bad, say the detractors, but they are heavily laden with DDT and that makes them doubly bad. I am not going to suggest that Lake Erie cohos do not have DDT in their systems. They do . . . but so do cohos from every other part of the world and so does just about every other fish that swims in fresh and salt water. So does your steak and your supermarket fruit, your milk, tobacco and about everything else you put in your mouth! By filleting and skinning cohos (and cutting off the thin strip of belly fat along the bottom edge of each fillet), about 99% of the accumulated chemicals can be removed.

Practice and a sharp knife are the only ingredients necessary to produce clean, boneless, skinless fillets. Oh yes, you also need a fish . . . but that's *your* problem. I won't say that filleting any fish is as easy as one, two, three. It does take some practice. But after about six fish have been dissected with varying degrees of success, the general idea should have established itself.

Step 1, left. Make the first cut at a slight angle behind the gill cover and, just missing the pectoral fin, cut to (but not through) the backbone.

Step 2, below. Cut in to backbone at the tail and allow the knife blade to ride along the backbone. Use a gentle see-sawing motion.





Step 3, above. As the knife coasts along, allow the blade to miss the dorsal fin.

Step 5, below. Different view of the same operation as number 4. A sharp knife is practically a "must" here.



Step 7, below. By sliding the blade forward, the skin will strip off smoothly.



Step 4, above. Work the edge underneath the remaining rib bones and slice them off along with the stomach membrane.

Step 6, below. To remove the skin (and it should be removed for good flavor), cut through a thin tip of flesh near the tail to the skin . . . but not through it.



Step 8, below. Skinless, boneless fillet is then cut in pieces for cooking, smoking or freezing.





LOVE THAT LADY!

by Roy Nuhfer

"When I look back over the success I have enjoyed in 50 years of fishing, I would like to say that it was the result of great skill and 'know-how' . . . but I know better! Most of the time it was darn little skill or knowledge—just a whole lot of luck!"

So says author Nuhfer, right, shown with one of "Lady Luck's" offerings from the upper reaches of the Allegheny River.



I live at Eldred, in McKean County, Pennsylvania, and do 90% of my fishing in the headwaters of the Allegheny River. "Lady Luck" seems to spend a lot of time there too.

There was the time about seven years ago when I took my 8-year-old grandson out for bass. Back then I could usually raise a couple of bass after dark on a Jitterburg and I wanted my grandson to experience the thrill of a bass belting a surface plug at night. Two hours of casting failed to produce a strike, so we started the boat for home. Halfway there we rammed into a submerged log and a fat 16 inch bass leaped into the boat! I wouldn't advocate that method for getting bass . . . it's tough on boats and requires an unusually close relationship with Lady Luck.

Conditions looked most unfavorable one July day about 15 years ago when I decided to go fishing at Dunbar Crossing, between Eldred and Port Allegheny. It was a hot sultry day and just 12:00 o'clock when I walked down to the bank of the river. The water was just a little cloudy so I snapped on a big Gold Williams Wobbler and cast it out. Wham! A good musky nailed the big spoon! I worked him to shore, and tossed the lure back into the river. As it fluttered back another musky inhaled it—I soon landed the twin of the first. I looked up and down the river but there was no one else crazy enough to be out in that heat. Even if anyone had seen me, can you imagine him walking into the local bar and telling this story: "A man parked his car, walked down to the river, made two casts and walked back with two legal muskies!" They'd tell him he had been out in the sun too long! That was Lady Luck at her best.

One other time I almost had two muskies with two consecutive casts. The second one was the only 'lunge I ever hooked that leaped out of the water five times, one right after the other, until he tailwalked from one shore to the other. Evidently Lady Luck was so impressed by this display that she allowed him to toss the spinner back at me.

Last winter I skidded my boat down the snowbank into the river above Eldred. Many people shake their heads when they see me going fishing in the winter. "Poor old Nuhfer, he must be losing his marbles," they say. I dropped anchor at the first hole and cast out my sinker plug. A five-pound walleye grabbed it before it went three feet. I dropped him in the boat and cast the plug again. This felt like a bigger walleye but it turned out to be a 34 inch musky which I measured and released. About that time I got a swelled head and said to myself, "I'll fill the boat full of fish today, I've got the technique they can't resist."

I guess Lady Luck can't stand a boastful character who talks to himself or maybe she had a date elsewhere, because I cast for two hours and never landed another fish. Now Lady Luck doesn't always forsake me after two casts. I was working one hole very thoroughly last year. I would anchor my boat and make about 20 casts, using two rods so I wouldn't have to change lures, then I would move down 20 feet and do it all over again. I decided no fish was going to hit after an hour of this so I pulled in my anchor and started to drift away but as the boat moved out I made one last cast back into the hole I had fished so carefully. A 41-inch musky came up and met it! In

this part of the river *that is a big fish*. That last cast was all *luck*—Love That Lady!

Not many Pennsylvania Anglers catch Golden Trout unless they go to West Virginia. Wilbur Williams, the Waterways Patrolman for McKean County, told me he thinks that's what I caught. Palomino Trout have spots—mine did not. It was pure gold. How did I catch it? Great skill as the evening sun went down? Floating a midge on one-pound tippet? Heck no. Lady Luck got in the act again.

On a hot day at 1:00 o'clock I was casting for muskys in the big hole above Brooklyn Street Bridge in the town of Port Allegheny. I was casting a musky size spinner with three-inch feathers—the lure weighed about $\frac{5}{8}$ ounce. A girl about ten years old came out on the bridge and asked me what I was fishing for—talking to me from the bridge. "I see a musky down here," she said. I continued casting where I was for a few minutes, but she was such a nice friendly girl I paddled down to give her "musky" a try.

I surmised she had seen a carp working up-stream and threw my lure toward the fast water where she said she could see the big fish. On the first cast I saw a flash that puzzled me. Next cast, I solved the puzzle. Landing a Golden Trout with my twenty-pound test line and stiff musky rod was not very sporty but it was successful. The trout was the most beautiful fish I ever caught and weighed five pounds $14\frac{1}{4}$ ounces.

I heard later that the local anglers had been trying for weeks to catch this trout. Because of its bright color it was always plainly visible from the bridge.

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Roy Nuhfer's Allegheny isn't very big in McKean County but its size doesn't seem to have any effect on the fine fishing available there. Robert Johnson, of Mt. Jewett, is shown fishing the Allegheny River near Turtlepoint.



SIX MONTHS

TO SOLITUDE

by Charles Furimsky



Six months had gone by since April's opening day of trout season. During this time I couldn't imagine the number of baits, flies or lures that cruised past the trouts' noses. Of course, many trout weren't around long enough to distinguish a free meal from a deadly hook. But my hope was that during these six months enough trout had survived the heavy fishing pressure. I wanted some action, but not a *trying* weekend attempting to land a *super* trout, who knew more lures and fly patterns than I knew.

These and more thoughts bobbed in my head that fall morning as I drove to central Pennsylvania from my McKeesport home. My wife figured those spring days were over, when I often left for a weekend fishing jaunt at two or three on a Saturday morning.

"October . . . this is October!" She complained, with all the understanding of a fisherman's wife. I offered her an explanation, attempting to blame the state for extending the trout season on certain designated streams and they just happened to be impossible to resist. Whatever, I was on my way to my favorite trout waters. I had been able to fish this area the first week of the spring trout season during the last five years. Now that the extended season included certain streams, in addition to lakes over ten acres, I could have a full weekend fishing waters that proved excellent in the past.

It wasn't long before I was parking alongside one of the most noted and heavily fished streams in central Pennsylvania, Penn's Creek. To my pleasant surprise, *I was the only fisherman.*

The sunshine reached the valley just as I began fishing. My only visible companions were two ducks that thought they were assigned to submarine patrol in the stream, contin-

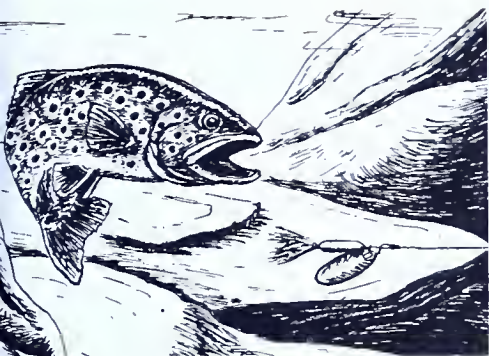
ually diving and surfacing. Along the stream I heard the chatter of chipmunks and the rustling of some fallen leaves as they scampered around.

From the stream bank the view of the fall foliage on the surrounding mountains was brilliant. The sun worked like a stage spotlight, with its rays moving along the mountain, so each tree could perform an act of color.

Penn's Creek, while usually high and murky in the spring, was almost too clear this sunny fall day. I could see the obstructions that had snagged so many of my lines in the past. Only a few holes were wide and deep enough for fish to conceal themselves from sight. I should have known that if those fish could see when the water was murky, they could probably read my license now. It didn't take long to find out. While fishing this first stretch of water I saw at least a dozen fish but caught only one small eight inch brownie.

The lesson I learned was nothing new. Most trout fishermen, including myself, know that if they can see the trout, the trout can see them. But I was alone on the stream and since there were no disturbances from other fishermen wading in the water, casting, talking loud, or sending out vibrations while walking the banks, I was less cautious. By not realizing I might have been the only person the trout had seen or heard for weeks, I acted like an anxious and curious fisherman.

To the trout, I poked my head out like a giraffe and crashed through the grown-over paths like a bull elephant. Actually, I peeked out from behind trees, glancing down from the bank into holes and I zigged through old paths heading along to other fishy stretches. My actions would not spook trout in the spring but the situation had changed now.



The trout had learned to survive and they knew their lesson well. In the spring they could have been fooled into taking a salmon egg, a small ball of cheese or the standard worm. Now they knew their diet had been mainly insect life. But my fly patterns got no results, so I quickly switched to my ultra-light spinning outfit.

The change improved my fishing. I tied on a miniature dardevle, a brass skeeter. My light line allowed the tiny lure to reach the opposite bank with ease. When I fished it back across I kept it moving just slow enough to keep from snagging the bottom, which was usually only a foot or two deep. Every few winds I would twitch my rod tip, causing the skeeter to flutter sporadically.

After an hour of serious fishing I had a dozen passes, around five hits, and two trout landed and released. I caught them both from the same hole and missed a few in the process. They were both brown trout, averaging a fat thirteen inches, and brightly defined in color. Their orangish-red spots looked like they were applied with magic marker. It made me feel good to release them, since they had survived the fishing pressures so long, and now at the end of the season they made one mistake that could have been their last. But I wasn't out for dinner, my freezer still had a few frozen trout left from last spring.

The rest of the day I fished other sections of Penn's Creek and found that certain rules were consistent.

Most important was a careful approach. If I got too close or made noise, the fish would vanish. And also, most of the fish were found at the head of the pool facing a riffle. Since the water was low, this was the section that had fast tumbling water with a high oxygen content.

My first cast was also very important. If I covered a span of water where a fish was present, 90% of the time he would make a pass the moment he spotted the lure. But if nothing happened, the following casts were usually fruitless. When a fish made a pass at the first cast without hitting the lure, I marked that spot in my mind. As I returned along the area on my way back to the car, I would remember to carefully cast for one last hope of catching the trout off-guard. I learned to limit my casts and not fish a stretch to death. If I was quiet, observant, prepared for a strike and careful not to overfish a spot but to cover as much water as possible with quality casts, my fishing success would improve.

The following day, Sunday, I decided to fish Spring Creek, a stream I believe is fished more than any other water in Pennsylvania. I began at the Benner Strings section, the well-known area on the Rockview Penitentiary grounds. Finally I saw another angler and by noon I had seen just three fishermen. That was quite a change from my spring visit when a parking space was difficult to find and hundreds of fishermen lined the banks.

The cautious rules that proved successful the day before had the same effect at Spring Creek. The water here, like Penn's Creek, was low and clear. Almost every strike I had was directly below fast water where the riffles spilled into the long pools. The slow moving water was unproductive.

I had tried flies, wet and dry, a few streamers and even some nymphs. My best bet still proved to

be a small lure. The skeeter again worked but I switched to tiny spinners, mostly using a miniature, white, size zero rooster tail. Before my fishing ended, I had released three good browns and one rainbow, and I saw about a dozen more trout make passes at my spinner. I covered a lot of water, casting and straining my eyes continually, but my fishing wouldn't have been productive without concentration.

While fishing the same waters six months earlier, I had released around twenty trout but then, the trout were aggressive and *everyone* caught fish. During this fall weekend trip, every trout was earned and only caught if I didn't make mistakes. I had to be a better fisherman, or I wouldn't land any fish. Now that I had refined my methods, I wondered how many more trout I'd catch if I would be as methodical in the spring, when the fish were more plentiful and less shy.

When I departed that Sunday afternoon, I had hoped the winter months ahead would pass quickly. I'm anxious to return and fish Spring and Penn's Creek again. I might again catch one of the trout I released during that fall trip. One thing for sure, I'm glad the extended season on these streams was established. The solitude of those two days will be the substance of much reminiscing during the winter days ahead.



THE EXTENDED TROUT SEASON

another
month
to
go—

Once again Pennsylvania's trout season has been extended until midnight, October 31, on 234 selected streams and all lakes, ponds and reservoirs which are open to public fishing.

The selected streams are those which are not normally expected to sustain trout through the winter months. The extension permits Pennsylvania Anglers to utilize the carry-over of stocked trout from last spring's releases.

Daily creel limit is three, regardless of water area.

For a complete listing of the streams open to trout fishing during the extended season—

WRITE:

Pennsylvania Fish Commission
"EXTENDED SEASON"
P.O. Box 1673
Harrisburg, Pa. 17120

think like a fish

by richard f. williamson



Biologists tell us that fish do not have brains, in human terms. No mass of tissue in the head of a fish controls its emotions or gives it the power to reason. But fish do have in-born instincts that serve them in much the same manner that brains control the actions of human beings and mammals.

One important key to successful angling is to match the functions of the human brain with the operations of the instincts of a fish.

In other words, the complete angler has developed the art of thinking like a fish.

Did you ever try to think like a fish; to imagine yourself to be a big trout or bass—and then try to figure out where you would spend most of your time?

It is this art that enables the skilled fisherman to read the water of even a strange stream, lake or pond and, as a result, take fish consistently.

All of our fishing lore is based on

facts that are known about the instincts and habits of fish and while they apply in a general sense to any water in which we fish, at the same time we have to do some reasoning of our own to solve the problem of particular fishing spots and the behavior of the fish we wish to catch.

Two basic instincts are possessed by every fish—from minnow to monster. One is the instinct that drives the fish to find and obtain the food it must have to sustain life. The second is the instinct that guides it to shelter and safety. In other words, virtually everything a fish does is born out of its appetite or its fear of its enemies—including fishermen. And nature has given the fish the ability to locate the best feeding stations and resting and hiding places in the water in which it lives.

Here is where the matter of an angler thinking like a fish is important. It is the angler's task to be able to recognize and then to fish properly

the places in the stream, pond or lake where the fish is either feeding or resting.

All of us know anglers who have what we call "fish sense," which is indicated by their habit of moving from pool to pool, fishing only certain sections of the water as they move along and often, actually, passing over more water than they fish. Fish sense, as a matter of fact, is nothing more than the ability of an angler to pick out at a glance the hiding places and feeding stations of fish.

Fish sense is not something that is born in a man or that is developed only by experts. It can be cultivated by any angler who will take the time to study fish and water situations. Not an excessive amount of time is required, either, for within the confines of bass or trout water the feeding stations and hiding places are well defined.

Take hiding places first, for fish actually spend more time in these lo-

cations than in feeding stations for the simple reason that hiding places offer them safety, and usually the hungry fish must take risks while feeding.

Pockets of deeper than average water in the vicinity of logs, boulders, or other submerged obstructions stand high on the list of hiding places. The depth of the water and the obstructions provide protective cover.

The shorelines of a stream offer additional hiding places. These include sections where the action of the current has cut into the shore at water level, creating a kind of roof of earth extending out over the water, and also thick tufts of grass and other vegetation as well as the lower branches of trees that overhang the water surface.

Rocky ledges, large boulders in stream pools, and areas where small rocks are clustered together are other shelters that are favored by fish.

In streams of all sizes, holes where the water deepens considerably are hiding places where the fish find safety in the water depth itself.

In lakes and ponds, patches of water lilies and weeds are constantly used by fish as protective cover. A spot in a lake where rising water has "drowned" trees and left their trunks standing starkly is also excellent refuge for fish. As in streams, overhanging foliage provides an umbrella of protection along the shore.

Now consider the feeding stations, and remember that large fish do not move around in the water any more than is necessary, so that the angler can assume that when fish begin feeding they will explore, first of all, the water in the immediate area of their hiding places.

Eddies of dead current along the edges of fast water are prime feeding stations. Here, food carried into the eddy by the current is easily seized by the hungry fish, and a fish feeding in the eddy can with ease dart out and seize food that is being carried past in the current.

Shore lines where insects fall from vegetation into the water and whose shallow waters are favorite haunts of minnows also are frequently used feeding stations.

Comparatively shallow riffles, which the unobserving angler is apt to pass over because of a general lack of water depth, provide much food for fish. The secret is that in virtually every riffle there are pockets of deeper water which will hold fish of often surprising proportions and these pockets

provide convenient and comfortable spots from which fish can snatch tidbits from the passing water.

The downstream side of a dam—usually a pocket of deep water where the currents churn under a top layer of frothy water—is a great depository for food for fish.

The shade of a bridge spanning a stream can be a fish cafeteria.

Still another is the shallow, fast-running tail of a stream pool.

In a pond or lake the same physical conditions that provide shelter for fish also serve to create ideal feeding stations. Lily pads and stands of weeds attract insects. Minnows find shelter and feed on the insects. Fish feed on the minnows and on the insects as well. Minnows congregate around the tops of trees that have toppled into the water, and fish dine on them. Bars and shallows in lakes and ponds are always prime angling targets. Fish emerge from surrounding deep water to feed on the shallows and shoals.

At times fish can be caught in places they use for shelter rather than for feeding. It may be because the fish is beginning to be hungry, or a big trout or bass may resent the presence of an intruder and attack it. At any rate, no good angler neglects obvious hiding places.

Of course, mastering the lore of where fish hide and feed does not alone guarantee angling success. The fisherman must learn how to approach such spots without alarming the fish and, having done that, must fish them properly.

A friend and I fished one hot summer afternoon in a creek pool that we knew contained a goodly number of bass of respectable size. We were using bait, in a sort of desperation effort, but strikes were few and far between. Then a farmer friend of ours happened along, also fishing with bait. He took a stand in the shallow riffle at the head of the pool and made a fairly long cast directly down-

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Here's an Easy way

*to
make
your
own*



CASTING PLUGS

By Warren Shepard

Not so many years ago many of us used to make up our own $\frac{5}{8}$ ounce bass plugs for bait casting. While most of us just whittled plug bodies out of wood, painted and added hooks, some of the boys used a lathe and squares of basswood or white cedar and turned out real works of art. Most of those old home-made plugs would catch fish too but making the bodies from raw chunks of wood was time consuming and I could never achieve a really professional looking paint job. Today, that's all changed. Now, any amateur tackle tinkerer can turn out his own casting plugs. And they'll be proved fish-catching patterns, nicely furnished with chromed hardware and beautifully finished. Best of all, the cost will only be a few cents per bait and the finished product will pretty much duplicate commercial jobs that retail for \$1.50 to \$3.00 each. Join the "Now

Crowd"—use readily available molded plastic plug bodies.

You can obtain molded plastic plug bodies from many of the same houses that supply fly tying gear. These companies have molded plastic plug bodies, plug hardware and lacquer and most will send you a catalog upon request. Some offer better than two dozen designs, including imitations of old favorites like: Pikie Minnow, Hula Popper, Jitterbug and Bass Oreno in better than 50 sizes from ultralight spinning to surfcasting, plus a full line of paints, decals, stencils and air brushes, along with plug hardware.

The best way to start is with a "Plug-making Kit." These kits include everything you will need *except* lacquer and will give you a good sampling of what's available as well as show you how simple modern plug making really is. Molded pastic plug



A "KIT" generally includes some easily recognized imitations of old favorites. They may not be impressive when you buy them "in the white," but read on . . .



Your set-up for painting molded plastic plug bodies should include (left) lacquer, thinner, wire for hanging and handling wet bodies and a juice can to hold the dipping lacquer.

bodies come "in the white," so if you can live with solid white lures, you won't even need any lacquer. But I like mine painted, so I bought a few pints of assorted colors of lacquer. Lacquer can be obtained from most of the same supply houses, paint stores or auto supply houses. Get a pint of lacquer *thinner* too. Lacquer runs about a buck; thinner—four bits.

Dip your plug bodies. Pour enough lacquer into a frozen orange juice can to completely immerse the plastic body, dip and hang on a string over newspaper to drip-dry. For "red-head" plugs, dip first in an off-white (or pale yellow) lacquer, dry then dip head-only at 45° angle in red lacquer. Using plastic bodies and unthinned lacquer, the bond and coverage is so good that only one coat is needed. "Eyes" should be painted on in bright *yellow*, then dotted and ringed in *black*. "Scale Finish" plugs must be sprayed, using air brush or aerosol can, with *gold* or *silver* lacquer and a mesh (netting) stencil. Spotting, dotting and blending of colors can be done with air brush or, crudely, with a fine tipped brush. Powdered zinc or artists' gold or bronzing powders may be sprinkled on still-wet lacquer for different effects. After painting, add hardware

and you're ready to "go fishin'".

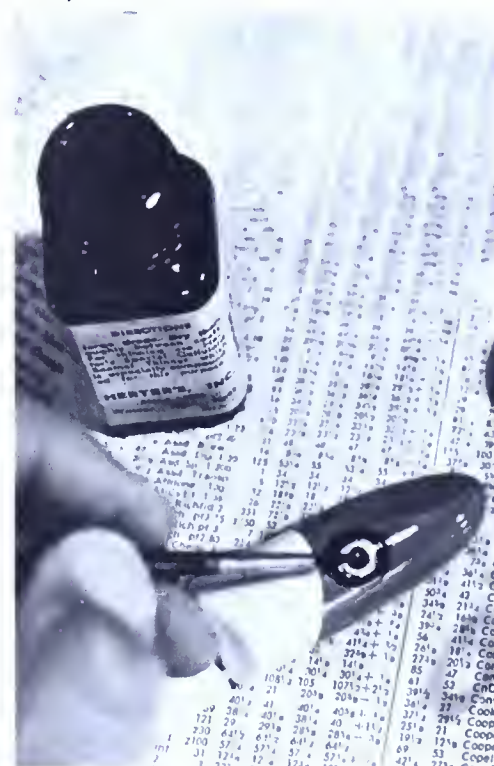
Once you have cut your plug making teeth on a simple kit, you will be ready to graduate to production line work. It's as easy to dip several plug bodies as it is one or two and the more you make, the bigger the savings, both in time and money. Price will run from a nickle for the smaller, hollow bodies up to 30¢ each for half ounce, solid tenite bass plug bodies. You will also need screw eyes, body screws, hook hangers and propellers (all around a cent each in bulk); treble hooks (3 to 4¢ each); and various types of metal plug wiggling scoops (average—about a nickel).

There are lots of patterns that you can "production line" at two-bits or less. And you can use ringed eye single hooks with screw eyes if you like and thus do away with treble hooks, hook hangers and screws—all relatively expensive hardware. Bait casting clubs or groups of anglers can pool their resources for greater savings. Order your favorite patterns of plastic plug bodies by the dozen (or, even by the gross, if you can use that many). What could be more fun some winter evening than getting a bunch of the fellows together for some plug makin' and yarn swappin'?



After dipping your plugs as directed in the text, they should be suspended as shown above to "drip-dry." Use screw eyes and wire hangers. A newspaper, placed below, will catch any excess dripping lacquer. The incomplected assortment above, even in this black and white photo, are beginning to resemble their commercial counterparts.

Use a fine brush to paint the "eyes" yellow; then "dot" and "ring" in black. This takes a steady hand.



Simple tools (left) are used for hardware mounting. Most plug bodies are pre-drilled at mounting points.

A fine tipped screwdriver facilitates the attaching of hook hangers. Your "bait" is ready for use.





LATE SEASON *TROUT*

by James Bryson

The average fisherman would not consider the taking of six trout in two days' fishing a great accomplishment. It would not normally warrant space in most publications either, unless of course, they were of record size . . . which mine weren't.

Mine however, had come at a time when trout fishing is at a low ebb in most Pennsylvania waters. They had also climaxed two previous disappointing fall seasons for me when but one trout had been taken after many hours of diligent fishing.

The time of the year was October, and most dedicated trout fishermen were off the streams. By most standards, fall trout fishing is far from ideal. Streams are usually low, warm and crystal clear. Hatches are sparse or non-existent and the memories are still vivid of the more fruitful days of spring and early summer.

Pennsylvania's regular trout season had ended. The extended season was in effect and only a few select waters were open to trout fishing throughout the State. During this period the creel limit is also reduced to three trout.

My work had brought me to Williamsport, three years earlier, and I was taking advantage, whenever

possible, of the excellent streams the area had to offer. The Loyalsock, Penns Creek, Slate Run and Little Pine are but a few within easy driving distance of Williamsport. There are many smaller streams and tributaries that afford good trout fishing all spring and into early summer.

Since coming east, I had taken up fly fishing but am no purist in the strict sense of the word. If conditions are not suitable for flies, I am not adverse to using lures, night crawlers, minnows—or whatever it takes to catch fish. During those days of fall fishing I had tried them all, but to no avail!

There were two reasons that prodded me into giving fall trout fishing one last effort.

First, while zeroing in a couple of rifles at a local shooting area one Sunday, I noticed the range was literally alive with grasshoppers and crickets. I had heard of trout being caught on them on occasion but for some reason had not tried them myself. Being that readily available, I felt they were now worth a try.

Second, the Pennsylvania mountains are breathtaking in the fall when they come alive with color. I could think of no better spot to enjoy a fall day than

on a Pennsylvania trout stream. The grasshoppers and crickets were but one more incentive.

My favorite fishing water is a stretch of stream just below the State turkey farm at Barbors, on the Loyalsock.

The "Sock" has an air of intrigue and a wild scenic quality that makes it a pleasure to be there . . . even when one is not taking trout. However, it has more than its share of fishable water and is rated among the best streams in Pennsylvania.

At stream's edge, my ultra light rod and reel was rigged with a length of leader tapered down to 7x, a number sixteen dry fly hook, grasshopper and a clear plastic bobber. The bobber gave me the necessary weight for casting the grasshopper, and being clear, would not be seen by the fish.

Grasshoppers and crickets have a collar-like hood that extends behind their head. Hooking them through this collar keeps them alive and they are at liberty to swim and flutter freely on the surface of the water.

My fishing usually begins either at the upper or lower end of the turkey farm hole. The hole starts with a large, rough riffle and gradually works into a long, smooth and deep stretch of water. As there is more than ample water there to hold trout year around, I decided to fish that stretch first.

As fishermen, we are usually ready and willing to try new techniques, equipment or baits to enhance our fishing luck or pleasure. Some of these things pay off, while others never do.

In the case of grasshoppers, they induced action almost at once. In two and one half hours of fishing, I netted three trout and lost or broke off several others. There were also plenty of rough fish to keep things interesting.

The next day I left work early to try my luck one more time. My fishing time was now limited. I was intent though, to try grasshoppers one more time.

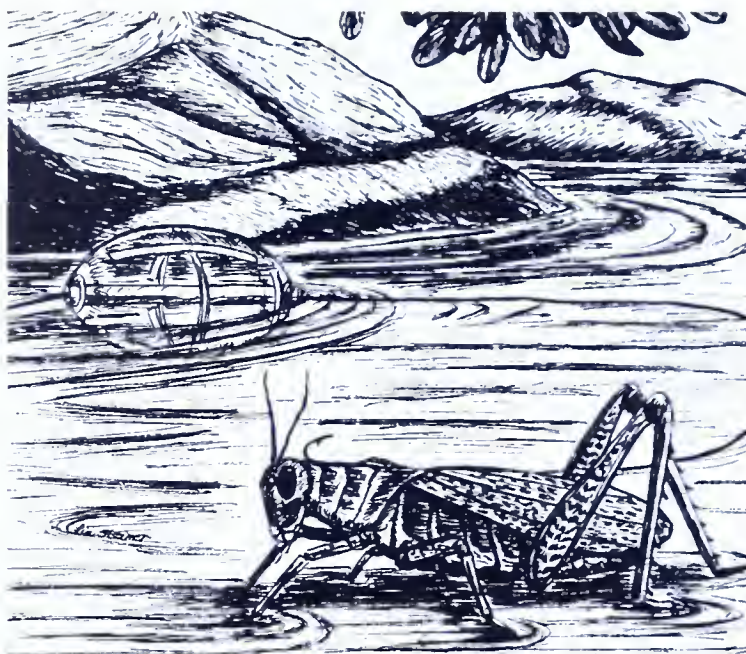
Late afternoon and evening found me in the same water as the day before and with the same success. A fourteen-incher came to net that evening and climaxed the end of my first successful Pennsylvania fall season.

Since that October, three years ago, crickets and grasshoppers have produced several fine catches of trout for me. On one occasion a limit of browns and brook trout were taken in June on some imported Georgia crickets that a local bait store supplied. Over all, however, they perform best in late summer and fall when they are available for a trout's diet.

Crickets and grasshoppers should be fished in much the same way one would fish a dry fly. Pick out the likely feeding and holding stations and make your casts float to these areas.

Trout are generally extremely cautious during the fall months due to the usual low clear water conditions. It is important to present the bait in a realistic manner and to strive for the most natural float possible.

Anyone with a spinning outfit can fish grasshop-

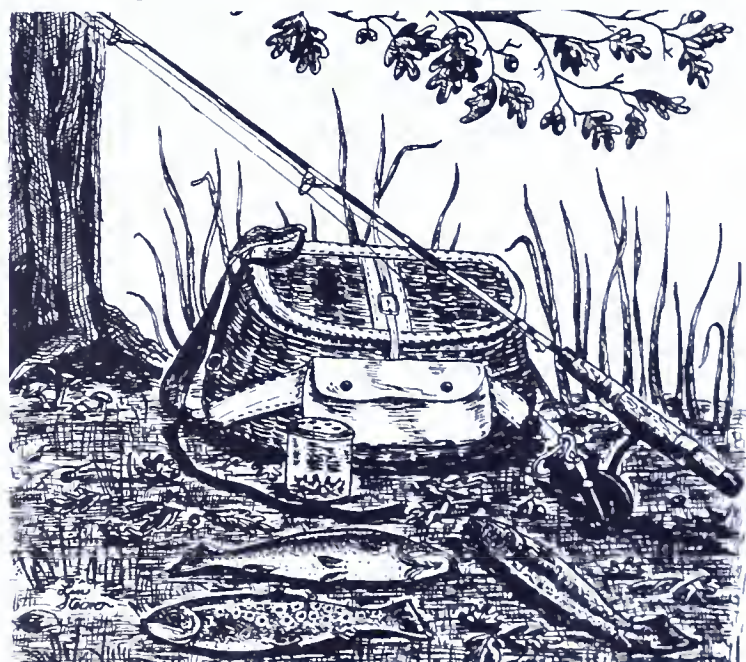


pers and crickets. A fly rod can be used too but it is more difficult to use with live bait. As mentioned, a clear plastic bobber, a few number sixteen or eighteen dry fly hooks and some 6 or 7x leader material is all that is needed.

If there is a drawback to fishing grasshoppers and crickets, it is that not only trout like them. There are days when white chubs, fall fish and rock bass will almost drive you off the stream! You can only hope that the next "slurp" will be that lunker trout you have been fishing for.

Grasshoppers and crickets are not a new bait. They have been used down through the years on a variety of fish and with repeated success. There are days however, when trout will not come up to anything. Grasshoppers and crickets are not a miracle bait or a guarantee of a full creel every time out. I can only tell you that they have greatly enhanced my fall trout fishing.

When the fields start coming alive with them next summer, give them a try. They rank high with me for taking late season trout.



KEYSTONE CAMPING

by Thad Bukowski

Camping for Coho

If you haven't caught your coho by this time, don't worry—October should be the peak month for this member of the Pacific salmon family.

By October, schools have worked their way well towards the shores of Lake Erie and their homing instinct will head them up the streams and runs into which they were originally implanted.

Five streams west of the city and six to the east are admittedly small, too small for fishing, but the ultimate goal of the spawning salmon. For this reason, the shores of Erie, near these streams, are coho haunts for anglers. Some catches of early returning immature chinook salmon will also take place, as 35,000 of these were experimentally released to supplement coho stockings with an even bigger new fish. The chinook has a five year life cycle whereas the coho lives for three years so the main chinook fishing story is yet to come

The camper has a topnotch private site available near Elk Creek, one of the streams to which the Coho returns. It may be reached by using Exit 5 off I-90 and is one mile south on Rt. 832. It is open until Oct. 15. At least a half dozen private sites are in the proximity of Presque Isle State Park, an eight mile peninsula on which camping is not permitted. The Erie Chamber of Commerce, 1006 State Street, Erie, may be contacted for a list of camping sites in the environs and information is always available for the stranger at the Administration Building, half-way down the Presque Isle Peninsula. The Pennsylvania Fish Commission's "Coho Patrol" which is composed of Waterway Patrolmen from all over the state, also provides information at Walnut Creek, where the camper may take his rig for the day from 5 a.m. until 10 p.m. when the boat access and parking area closes each evening. Walnut Creek is six miles

are available for fishermen when Lake Erie itself is too rough. *Rental boats are not available at Walnut Creek*, but the Pennsylvania Fish Commission provides boat launching facilities for personal boats.

Although the most common fishing method for coho is with flashy spoons and spinners with trailing night crawlers, Erie anglers have confounded the experts who say a coho quits feeding as it tries to enter spawning streams. They have been catching more coho from the Waterworks Pond on Presque Isle with bobber and nightcrawler trailing about a foot to two feet below than with any other method.

Veterans of Erie coho fishing report that successes come on the lake when it is at its worst and when most everyone else wants to be cozy and stay at home. It is at this time that they put on their "longjohns", don chest waders, heavy jackets or insulates to bear the brunt of Lake Erie's shores to spin for coho.

Biologists report that not enough coho are being taken offshore where they wait in schools for the final spawning urge. The coho appears to feed best when temperatures are about 54 degrees and too few fishermen set rigs to go after the fish when they are waiting in such water tem-



Although no camping or overnight parking is permitted, campers avail themselves of the boat launching and day parking facilities at the Pennsylvania Fish Commission's Walnut Creek Access.

in a year or two. The chinook are expected to be heftier than the coho, and when fully grown should go well over the 10 pounds which some of the coho have reached.

The camping-fisherman should have the advantage over the regular angler in catching his coho. Coho fishing is unpredictable because of weather problems which affect Lake Erie and make it unfishable on certain days. A stay covering a few days in the fishing areas may produce much more rewarding results than just one jaunt to the lake shore.

west of Erie off Rt. 5 about one mile beyond Vernondale, turning right on Manchester Rd.

The camper may have the opportunity of watching members of the Fish Commission net hundreds of Coho for transfer to other fishing spots and the sight of the catch is worth a camping trip itself. Fish are transferred for anglers to the Waterworks Pond on Presque Isle and to Lake Pleasant, a 60 acre trout lake, south of Erie off Rt. 8 near Wattsburg. Over 1,000 adult Coho go into Lake Pleasant and rental rowboats

peratures. Schooling coho often "purpoise" or come to the top, sometimes near the shore and boaters can get them by casting shiny stuff ahead of the moving school just as bass fishing is done casting the "shad rise" in the Tennessee Valley lake country.

Sturdy spinning or spin-casting outfits (with 8 to 10 pound minimum test line) are recommended. Daredevles, Mepps and Swedish swings with spinners in about No. 3 size, are the most often recommended hardware. Flashy silver, gold and blue-white appear most popular with



Coho anglers have the choice of waiting out one of Erie's violent moods (left) or journeying to Lake Pleasant, off Rt. 8, just south of the city of Erie. Its 60 acres are well stocked with Coho netted from tributary streams and provide salmon fishing right into ice fishing season.



the fish.

Dave DeHaven, Erie sportsman, who caught 29 coho in one season reports, "All the info you've got to the contrary, if you fish for them like for walleye, you'll have your greatest chance of success."

Some anglers are luckier in the early afternoons, about 3 or 4 p.m., while others say they do better in the late morning, about 10 a.m. Success

often appears to come "all of a sudden" when coho make a concerted move toward streams because of a change in weather, winds or water temperatures. The lucky fisherman at such times can get his limit of three, quickly, and fish invariably go above the 9 inch size limit. In fact, most range in the two-foot to two-and-a-half-foot category and weigh 6-10 pounds.

Another gourmet angler I know who caught seven last year raves about their eating qualities.

"Any way you try them they're really delicious," he reports. "They're especially good if you stuff and bake them. Wrap them in aluminum foil to keep them moist." He also loves them broiled and finally adds, "If you take the trouble to smoke them—wow, they're sensational!"

Love That Lady

continued from page 11

Lady Luck is not active on sunny days only. Last year I started up the river above Eldred and got caught in a downpour of rain. My rain suit was keeping me partly dry but my boat had so much water in it that it handled sluggishly. I decided to run it on to the shore and pull the drain plug while I waited out the storm. As the water drained out I picked up my rod and made a cast. A 32-inch musky was out there and liked my offering. Again, one cast and I had him. I measured him and released him to grow bigger. I didn't know if Lady Luck had any power over the lightning that was flashing nearby. It scares me when I'm on the water so I departed early for shelter. I'm glad I made that one cast from shore—it saved a soggy day.

You may get the impression that I'm just a blundering fisherman and it's true, I do make my share of blunders but I also fish diligently and long. Sometimes I catch fish when I'm doing everything the way I think is right. It's when you do almost everything contrary to what seems right and still get fish you have to credit luck. I can think of two instances like that.

One night three of us were coming down the river in my old wooden boat. It was a heavy old tub and we were moving with the current and

oars when we hit a partly submerged log. When the boat stuck there was a lot of splashing and rocking and flashing of lights. I chose this instant to flip my surface plug about twenty feet from the boat . . . a nice small-mouth didn't know the rules and hit it.

Last year I had worked over three of my plugs. I wanted to try them out so I sneaked up through a hole I intended to fish. After clearing the hole I gunned the motor and ran the boat up on to a fallen tree. I made plenty of noise, clattered my tackle box and banged things around in my noisy aluminum boat. I tried the first plug—it was hopeless and the second was worse! I snapped on the third and tossed it out about fifteen feet so I could watch it. It looked good to me. A musky liked it too and he hit it right under my nose. He was legal but I released him. The hole I intended to fish yielded nothing but that plug did catch several fish later on.

Sometimes Lady Luck works in very strange ways. In early March, 1970, I took my boat up to Coryville planning on floating down Potato Creek to the Allegheny. The stream was covered with oil! I knew there were some oil leases up the stream so I launched my boat and ran upstream to see if I could find the source of the oil spill. The lines on the leases were OK, so I went back, took my boat out, and went up to the next bridge.

I launched my boat again and tracked the oil to a side stream too small to take my boat up. By now I had wasted most of my fishing time but I drove my boat a short distance upstream from the oil spill and thought I'd try for a walleye. I put on a ¼ ounce plug and cast about six times. Something hit and I thought I had a giant walleye. I played it very carefully because the hooks on that small Rebel were fragile. Soon I saw it was a good musky. I worked her close and as I tried to lift her into the boat the mesh of the net broke loose from the frame. I now had a musky out in the stream with the frame of the net draped over my line. The mesh was hanging on the musky's head. You had better be on good terms with Lady Luck in a situation like this! I was, and worked that fish in close, grabbed it by the gills and dragged it into the boat. My fingers were so numb that I could hardly feel the resulting scratches.

I wanted to take some snapshots and call WWP Wilbur Williams about the oil spill so I took off for home. That musky weighed just 25 pounds 9 ounces and except for trying to trace the oil spill—I never would have been fishing up there.

When I go fishing I plan on doing it like the experts tell it should be done. But if that fails and Lady Luck still gives me the come-on, you can bet your best fishing hat I'll never say no to her. She's been so good to me for 50 years.

Popping Frogs are particularly attractive to largemouth bass . . . you'll want to include them in your—

FLY TYING

by Chauncy K. Lively

Photos by the author



Weight and bulk in bass bugs are factors which frighten off many would-be bass fly-rodgers. There are popping bugs made with large cork bodies and enormous, heavy-wire hooks which make casting, with all but the stoutest of rods, a difficult task indeed. Yet, there can be no doubt as to the effectiveness of the jumbo poppers, particularly when largemouth bass are the intended quarry, for they generally are not satisfied with less than a substantial mouthful. Fortunately, for those who don't tie their own bugs, there are a few manufacturers of poppers with really first-class casting and fish-catching qualities.

Fly-casting can be a pleasurable business in itself, even when the fish are uncooperative. I've never been fortunate enough to find an occasion when more fishing time was devoted to landing fish than to actual casting so I try to use bass bugs which cast well and at the same time manage to interest a bass now and then. In that way I can have the best of both worlds and no trip is a failure when the bass are unwilling.

Our Popping Frog is an example of a bug which not only handles easily but has the requisite size and apparent bulk to be attractive to large bass. The body is fashioned from a cork cylinder sliced in half diagonally, a ploy designed to reduce cork weight. Cut thus, the half-cork presents the same underwater view as the whole cylinder and at the same time it preserves the large face, or popping surface, of the bug.

Hooks are critical items in the making of popping bugs. Those with kinked shanks (known as hump-shank hooks) are most desirable because they provide a solid union between cork and steel, the kink pre-

venting the body from turning around the shank. Because of their superior hooking qualities I have always been partial to long-shanked hooks for poppers when I can find them of regular or fine wire. Two-hump-shank hooks meeting these requirements are Herter's #993 DH and Mustad's #3989, although stocks of the latter are rather difficult to come by these days. The choice between up-eye, down-eye or straight, ringed-eye is purely a personal one. Most anglers use the improved cinch knot to secure leader to hook and theoretically its use with the up-eye hook would tend to tip the bug downward when worked. The opposite effect would apply to the downeye, while the forward pull against the ringed eye should be unaffected. However, I have used the cinch knot with all three styles of hooks and have found no practical advantage of one over the others.

If satisfactory hump-shank hooks are not obtainable it's easy enough to bend a kink in the shank of a conventional hook, provided it is of round wire. Long-shanked Limerick or Carlisle models lend themselves well to this purpose. With fine-nosed pliers simply bend a small, inverted U in the forward portion of the hook's shank.

The jointed legs of the Popping Frog are made individually of bucktail hair, each leg enclosing a length of braided casting line within the hair. The line makes the attachment of the legs to the hook a simple matter and facilitates stabilizing the angle of the legs. When I first began tying the Frog I made the legs by suspending the braided line between two vises and binding the hair in place in this fixed position. But in recent years I found I can just as

easily hold the hair in my left hand and make the thread wraps with my right. When the bug is completed the flexibility of the legs should be tested by stroking the legs backwards. If they appear stiff, cut a few hairs out of the insides of the thighs until the desired 'kick' is obtained.

If I had to limit myself to a single popper for largemouth bass I'm fairly certain the Popping Frog would get the nod for it has produced far too many fine bass for me to regard it lightly.—Like the time it was quietly taken next to a weed bed at Canadohta Lake by an unseen monster which refused to show itself. Despite all the pressure I could exert with the big rod, the fish simply bored deep and finally bulled its way into the weeds, where it gained leverage and pulled free. I remember thinking that no bass could be as heavy as that fish. Could it have been one of Canadohta's legendary muskies?

Then there was the time, again at Canadohta, when we had to drive into town and didn't return to our rented cottage until a late hour. The night was still, dark and muggy, the kind when you *know* big bass are going to be on the prowl, and I decided to spend a half hour casting from the dock before retiring. Actually, it didn't take that long. On the second cast the Frog was taken with a watery explosion and I eventually landed a largemouth bass measuring 20½ inches and weighing just a shade under five pounds. I put him on a stringer and attached it to the dock overnight, then the following day I photographed him in good light, thanked him for his performance and released him in a sheltered bay nearby.—Not a bad fish for a casual encounter.

TYING A POPPING FROG:

◀ 1. Preparing the cork body: (Left) Cut a 1/2" dia. cork cylinder to 1/2" length. (Center) With a razor blade slice the cork diagonally in half. (Right) Shape one of the half-cylinders with sandpaper to remove sharp edges. Then cut a slot in underside of body to accommodate hook.

2. Prepare hook by spiralling thread from ► eye to middle of shank and back to eye. Whip finish and trim off waste thread. Hook is Herter's 993 DH, size #4, 3x long.

◀ 3. Fill slot with hard-drying, waterproof cement or plastic wood and press body onto hook.

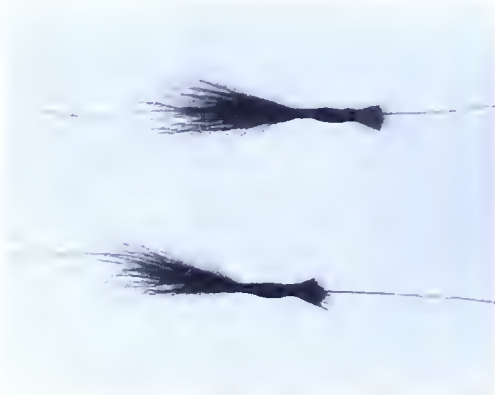
4. Legs are formed individually by binding ► green-dyed bucktail hair around 6" length of 18 lb. braided casting line as shown. Length of hair legs is about 2 1/2". Be sure thread windings are spaced identically in each pair of legs.

◀ 5. Trim butts of hair fairly close to thread wrapping. Cut 3/8" length of straight pin and with tweezers insert tip inside 'knee joint.'

6. Fasten legs at rear of body by binding ► line protruding from hair butts to shank of hook. Make several firm turns of thread around line and hook, then half-hitch. Trim excess line close to winding as shown. Whip-finish at rear of body and cut off thread.

◀ 7. Generously apply cement to butts of legs and rear of body, both above and below hook. When cement is partially set, position legs to desired angle. When cement is dry, grasp protruding line with left hand and with right, shove hair forward, as shown, to achieve effect of frog's muscular upper legs. Then cut off excess protruding lines.

8. With pliers, bend leg joints to proper ► angle. Then paint the upper body and leg windings with olive green lacquer. The underside and face are painted cream or yellow. Spots may be applied with the tip of a wood dowel. This completes Popping Frog.





DISCOVERED NEW BASS LURE!

The following was told to me by Bob McCundy of Annville:

"While fishing in the Swatara Creek (Lebanon County) one evening, I had a new experience in my nearly forty years of fishing. Sitting on the bank of the old "Swatty" with my worm supply nearly exhausted I took one hook off the line to save my worms. The hook that I removed was fastened to a small brass snap swivel which I left on the line. I baited the hook and threw in again. Thinking the worm should be pretty well chewed up by chubs and sunnies, I started to reel in to check the bait. Then suddenly I had a good strike. By now I knew I had enough fish on the line to stink up the frying pan. What I landed was a 12 inch smallmouth bass that to my surprise was hooked by the snap swivel—perfectly in the lip. Naturally there was no need of a frying pan as there were 11 days to go till the season opens. If anyone is interested in some old used bass lures, let me know as I'm thinking about switching to swivel snaps!"

Paul Harnberger
WWP (Lebanon Co.)

NEW MATE—

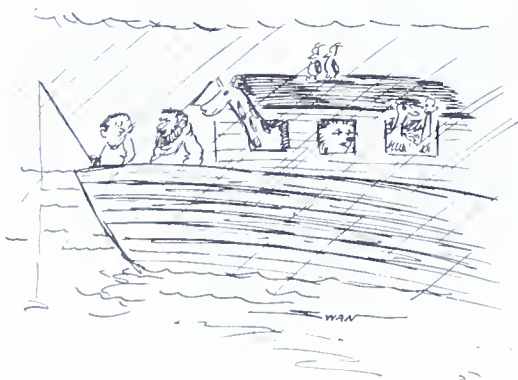
The Erie Coast Guard Station has a crew of 17 men—recently the crew aboard the 30 foot patrol boat found a stowaway aboard while underway. This stowaway wore a black mask! It was a half grown raccoon and was very pugnacious to the crew. After feeding him one time he became a little more friendly but when returning to the dock he was escorted ashore. This raccoon was found aboard again on the next patrol—so, BM 1 Robert Roman decided that since this raccoon was determined to become part of the Coast Guard that they would have to live with it. So now the station has an extra hand aboard—I wonder if the C. O. at District Cleveland has a record of this enlistment.

Norman E. Ely
WWP (Erie Co.)

LITTER'LY PIGS!

Cal Miller, operator of Shady Acres Campgrounds near the Lake Wallenpaupack Access Area, related a story to me and it should make a person think. It seems that a family of campers from his camp grounds wanted a place to go fishing so Cal sent them over to the Access Area. When they arrived they found a good bit of litter so they proceeded to pick it up and placed it in the cans that are provided. It wasn't 10 minutes later that a car came in and in this same area that was just cleaned up, started throwing cans and paper cups etc. out of the car windows. When the camping family saw this they couldn't believe it. They returned to the camp grounds after their fishing and asked Mr. and Mrs. Miller "Don't these people know what they have? What do they expect?" The campers come from New Jersey and they said that they have nothing like this area to go to.

Joseph E. Bartley
WWP (Pike/Wayne Cos.)



CAREFUL SON, WE ONLY HAVE
TWO WORMS!

Jasper Bourke, who has a hunting and fishing cabin near Long Pond in Wayne County still thinks that the Fish Commission is best of all. He signed up for the Pennsylvania Angler due to the fact he could buy a fishing license for \$2.00 and felt he owed more as the fishing was so good.

Harland F. Reynolds
WWP (Wayne Co.)

WRONG AGAIN!

This story was related to me by my father-in-law, Mr. John Roberts of Edwardsville. He was fishing recently in a lake in a remote section of northeast Pennsylvania. After trying his luck awhile he noticed a fisherwoman walking toward him carrying a large bucket. When asked how they were biting she replied, "Fine, I caught 28." He asked what they were and she said, "28 Silver Perch." Upon looking in the bucket, he discovered 28 nice sized *Shiners*.

Later on the same day another fisherman who he became acquainted with said that he knew where there were some nice *brown trout* in the lake and that he would show him. Soon he spied one and told Mr. Roberts to drop his worm near the fish. He did, had a strike and reeled in a fat *largemouth bass*.

Frederick Mussel
WWP (Lehigh Co.)

BATTY!

Carroll Irwin, Special Waterways Patrolman, related this story to me.

While fishing Caldwell Creek using a fly rod and dry flies, Mr. Irwin had a good hit. After a small amount of fighting he noticed something peculiar. The line was flying in the air instead of staying in the water. It turned out, much to his disappointment, instead of a fish on the line he had landed a bat.

James Carter
WWP (Erie Co.)

WELL DONE!

I feel as though a tip of the hat and a pat on the back should go to the Special Waterways Patrolmen of Dauphin County for the fine work and effort they put forth in assisting flood victims in the areas of Highspire, Harrisburg, Millersburg, Steelton, Lykens and throughout the flood areas of the county in general. These men did everything from boat rescue work to directing traffic, driving ambulances, delivering clothes to flood victims, delivering medical supplies and assisting in helicopter flights to stranded areas. I would like to convey to them a "Well Done." In 7 days, 453 hours were worked by 6 deputies. My thanks to them all for a display of true dedication for the safety and well being of their fellowmen.

Jahn E. Stepanski
WWP (Dauphin Co.)

SHORT PICKEREL?

At the old Torresdale Fish Hatchery one afternoon during the summer Cane Pole season in Philadelphia, a small boy in the area of the Superintendent's home was shouting, "An Alligator bit me!" The superintendent, hearing this, came out of the garage and observed what appeared to be a short pickerel and shouted back, "The pickerel is too short, put it back." The boy shouted "An alligator bit me!" This went on for several minutes with the superintendent, Bill Brinkman, becoming quite upset over the apparent lack of compliance from the lad so he ran over to him to make him put the "short fish" back in the ponds before harm befell it. Imagine his shock when he intercepted the lad and discovered that it indeed was an *Alligator* that the boy had caught while fishing with a minnow for bait—and a rather nasty one! This occurrence does have a happy ending for the young fisherman took his catch home, after treating the lacerations on his fingers and hand.

Frank Schilling
WWP (Philadelphia Co.)

FLOATERS GALORE

Pine Creek float trips are getting quite popular as the following figures will show. These counts were taken in a two hour period on April 29th and about one hour on April 30th. On the 29th, 65 rafts, 28 canoes, and 3 kayaks were counted. On the 30th, 95 rafts and 45 canoes were counted. It was estimated that over 500 float trips were made on that weekend. This, of course, did not please the fishermen who were trying their luck with the trout. Most fishermen say that when a raft floats over where they are fishing it takes anywhere from 15 minutes to one-half hour for the fish to start working again.

Raymond Hoover
WWP (Tioga County)

BIG HUNT!

While checking some fishermen and fisherwomen along the shore of Lake Wallenpaupack (the men had the long hair) one of them made a statement as I was leaving that, "I can't find it, I can't find it," the other man asked what he couldn't find and the answer was "MY BARRETTE." Some people have all the trouble:

Joseph E. Bartley
WWP (Pike-Wayne Counties)

TRUE SPORTSMEN

Some people catch trophy size fish and have them mounted. Others eat their prize catches without realizing what they have accomplished. But, SWP Doug O'Shea of Beaver County goes one better! Doug returns his to the water. Recently, Doug called to inform me he had caught a citation size bullhead which he put in his spring house until I could verify the size for his award. The fish measured 23 inches and weighed 5½ lbs. After I obtained the necessary information, Doug returned the fish to the strip pond from where it was taken. Doug said, "This way a youngster may get a crack at catching the same trophy." This was a nice gesture on Doug's part, but what's even more amazing is the fact that Deputy O'Shea is a very good amateur taxidermist!!!!

Don Parrish
WWP (Beaver Co.)

"OLD, FAT AND UGLY"!

Some individuals certainly should check in to the book "How To Win Friends and Influence People." A case in point follows. While we were on patrol of Glendale Lake, SWP John Patterson observed a fellow fishing down near one of the boat mooring areas. SWP Patterson went down to check him and shortly returned with the individual following meekly behind. It seems that he did not have a fishing license. When I questioned him, he admitted that he had been fishing without a license. He also told us that he had been told to watch out for SWP Patterson, who, in his own words, was supposed to be an "Old, Fat, Ugly-looking fellow." Needless to say, SWP Patterson was not exactly overjoyed by this description. It also goes to show that you can't believe everything you hear.

Walter A. Rosser
WWP (Blair Co.)

PENNSYLVANIA FISHES —50¢

Recently we had many out-of-state visitors in the Pymatuning area for the National Retriever Trials and, of course, some of these people were fishermen. While talking with one individual who was using waders and a fly rod to fish one evening at Pymatuning, we got into a conversation on the Pymatuning area. This man, being from a western state, was greatly impressed with all the fish at the spillway, where they feed bread to the

carp. His comment on the spillway was "When I return home, I'm going to suggest our Fish and Game make an area similar to the one you have where people can feed the fish as I've never seen so many beautiful big "Trout" at one time. I just did not have the heart to tell the fisherman that these were carp as he looked to be a very sincere fisherman, and this would probably embarrass him.

Warren L. Beaver
WWP (W. Crawford Co.)

BEST TIME OF ALL—

It is getting to be that time of year again, which I think is the best time for warm water fishing. Will cite some examples.

A group of fishermen from Plymouth, Pa., which is about 35 miles from Lake Carey, will be making a trip up here to fish for walleyes. They fish from the causeway where thousands of fishermen have fished during the summer months and perhaps catch one or two stragglers. They will be fishing from late October to freeze-up. They fish from one hour before and one hour after dark. The colder and rougher the weather, the better the fish seem to bite. These men will average, at the very least, one good Walleye a trip. Very seldom, if ever, do I see a local fisherman at this time of year at the lake. But I always hear, "When are you going to stock the lake with walleyes? There are no more walleyes in the lake," from local people.

Another fisherman who is retired and has a cottage at Myo Beach does a lot of fishing during the summer months. He may take one or two muskies during the whole summer. Last November he took six legal muskies and some real good size smallmouth bass.

Another group, from Meshoppen, never purchase their licenses until October. These men fish the shallow areas of the river from the shoreline. Use a floating lure, retrieved very slowly (and the darker the night the better they like it) they take some good walleyes and very nice smallmouth bass.

Another fisherman from Lake Winola fishes there the year round but finds late October and November the best time to fish. He catches some largemouth bass so large that summer fishermen would not believe were in the lake.

Stephen A. Shabbick
WWP (Wyoming Co.)

BOATING

Questions & Answers

by Capt. Jack Ross

From G. V., Pittsburgh:

"During the floods in June, there was a lot of talk about salvage rights and who owned a boat that was found floating down the river. Can you explain this?"

—The law of salvage is designed to encourage the saving of property in peril on the water, but only applies on navigable waters such as the Western Rivers, tidal waters, and other commercially navigable streams. A salvage service must be voluntary, the property salvaged must have been in some immediate danger, and the effort must be successful. If a salvor meets all of these tests, then he is entitled to a salvage award. Usually, the owner of the property and the salvor will agree on a fair amount, but if not, the salvor may hold the property until a federal court takes jurisdiction. The court will determine the fair value of the salvor's services, usually no more than 10 to 25 percent of the actual value of the property salvaged, and order the owner to pay. If the owner fails to discharge the obligation, the salvaged property will be sold by the federal marshal, and the salvor paid out of the proceeds. Any remainder goes to the owner. It should be remembered that a salvor does not ever become the owner of the salvaged property, although he may hold the property at his own risk until a settlement is had or a court takes jurisdiction. Valid and reasonable claims for salvage are usually paid promptly by insurance companies and a salvor who acts illegally or damages the property after salvaging it is fully responsible.



From S. G., Mifflinburg:

"The capacity plate on my 14-foot aluminum boat sets limits of three persons at 150 lbs. each with a 20-hp. motor, or a total for persons and gear of 750 lbs. If I use a 6-hp. motor and tank with a weight of less than 100 lbs., can I legally carry four persons

if the total weight in the boat is still well under 750 lbs.?"

—Provided the load in the boat is properly distributed, and the craft still has adequate freeboard and proper trim, I think you would be legal. The unfortunate working of the capacity plates in general use makes it somewhat unclear just which limit is controlling. So far as I can tell, there has not yet been a judicial determination on this point but the answer set forth here has been checked with the Pennsylvania Water Patrol and is believed correct.



From T. M. V., Harrisburg:

"My boat was lost in the flood in June, and I have not been able to collect on my insurance. The agent tells me the reason that the company will not pay is that the boat may be found. Is this normal?"

—Your agent is jangling your chain. All that is required by any reputable company is a notarized statement from the owner setting forth the circumstances of the loss. If you have any further difficulty on this claim, I suggest calling the state Insurance Commission office in Harrisburg.



From W. R. H., Sharon:

"If I lend my boat to a friend and he has an accident, would I be liable in any way for the damages?"

—It would depend to some extent on the cause of the accident and the location. If your friend was clearly incompetent to operate the boat, and this incompetence caused the casualty, you would probably be held liable regardless. There is a section in the Pennsylvania Motor Boat Law that provides for liability of the owner when he lends or otherwise permits the use of his boat and such use re-

sults in damage. On federal navigable waters, it is sometimes possible for an innocent owner to limit his liability to the value of the boat, provided he is entirely without knowledge of or connected with, the cause of the mishap. If the accident is caused by some unseaworthy condition of the boat—or if the owner knew that the operator was too inexperienced to safely run the boat, then he would not be permitted to limit, and would be fully liable.



From S. J., Williamsport:

"We plan to trailer our outboard boat to a point as far up the Allegheny River as possible, then cruise down to Pittsburgh. Where is the uppermost launching ramp on the navigable portion of the river?"

—The last launching ramp below the first riffle is at Cogley's Park, East Brady, just off Pennsylvania Route 68. From here, it is 69.5 miles to Pittsburgh, with eight locks along the way. The trip takes about eight hours.

Leaky Boots

continued from page 5

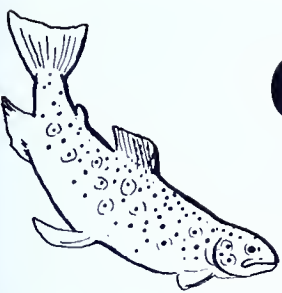
CAUGHT IN THE ACT!

Just to show you how some fishermen(?) will go to any length to get trout! During one of the in-season stockings along Penns Creek in Union County, through the keen eyes and quick action of Waterways Patrolman Richard Fry, one individual was apprehended in the act of removing some large trout from the bucket, breaking their necks and hiding them under the rocks along the stream.

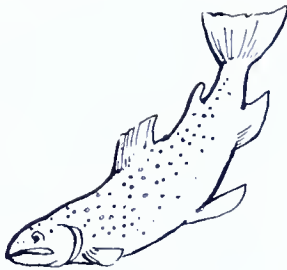
The other fishermen were also angered by this individual and their comments ranged from "tearing up his license on the spot", to "dumping" him in the stream!

Our many thanks to WWP Fry!

Name withheld by request



CASTING WITH THE CO-OPS BY BILL PORTER



The Chambersburg Rod and Gun Club, Franklin County, had a problem some time ago. Actually the problem was one that many clubs would like to have. Chambersburg simply had *too many fish* that grew *too large* for the space available in spite of a very liberal stocking program in Franklin County waters.

The obvious solution was more room at a different site. A readymade location was available on the Franklin County Home property east of Chambersburg. Arrangements were made for its use and on the surface, the problem seemed solved.

Things weren't quite that simple. Construction at the site, dollars to pay for work and materials, transfer of fish, feeding schedules and other items had to be worked out and implemented. *Cooperation*—the name of the nursery game, came from various sources, including: Knouse Foods, the Franklin County officials, the Pennsylvania Fish Commission, and the Chambersburg Rod and Gun Club.

Some details of the project are in order. Initially the water source, known as the North Branch of the Falling Springs, comes from a spring about a half mile above the county property. Water flow is about 3,000 gallons per minute with excellent temperatures. A July reading showed the water at 56° with an air temperature of 84° and cold weather water readings recorded nothing below 45°. Obviously this was a plus.

Another plus was the cement walls that contained and controlled the stream in front of the Franklin County Home. Stream width varied from 12½ to 15 feet, but the walls were basically intact, straight and smooth, reducing construction costs.

An organizational meeting of all parties concerned was held November 3, 1971, with Bryce Carnell, Franklin County WWP, and Bob Brown, Chief, Cooperative Nursery Program, representing the Commission. Jay McGlaughlin and Erlow Kelley were the administrative representatives from Knouse and Bob Klenzing and Nelson Over were the

club members at the planning session.

To make a long story short, the operation was underway shortly thereafter with Knouse Foods picking up the \$5,000 tab. More on this later.

The Goetz Construction Company received the contract for the major work that involved a number of steps. Initially, a channel and cofferdam had to be built to re-route the water. This done, the streambed had to be cleaned of mud and debris to a depth of 8" below the original surface. Following this operation, the bottom of the stream was cemented for the entire 240-foot walled portion. At this point obvious progress could be observed.

Following the cement work, bulkheads were built, forms poured, and heavy aluminum angle keyways installed. Other refinements were added in the form of restraining pipes that could be unscrewed for seining and cleaning purposes. Planks and screens completed the basic work and the new nursery was ready.

Additional work has been done since the major effort. The parking area has been restored since the stream returned to its proper channel. Blacktopping now includes the parking spot and the sides of the raceway where most visitors would walk. Screens to control leaf fall were another addition.

Over 20,000 two-year olds were placed in residence in the new nursery with room for many thousands more of the large trout. The Chambersburg club raises and releases about 29,000 trout a year and would like to hold more over to stock larger fish in Franklin County's open waters. The new facility obviously provides this opportunity.

And it would seem that the story would end at this point. Not quite—there are a few final kudos to mention. The cooperation of the Franklin County Commissioners and officials was an important issue to the project. Their permission to use the site was vital.

Funds—usually a problem with most cooperative nursery clubs—be-

came no problem once the officials at Knouse were convinced of the value of the project and the soundness of the plans. This was Knouse Foods second philanthropic gesture on behalf of the Cooperative Nursery Program. The Adams County Sportsmen nursery was their first. They deserve credit as the first major industry in the state to take such steps to the degree of support they supplied.

Bryce Carnell, Franklin County WWP, spearheaded the Fish Commission's effort on the local level. As with Knouse, so was it with Bryce—a second effort—he had been active in the original Knouse involvement with the Adams County club.

Then the Chambersburg Rod and Gun Club played a major roll in the total project. It was their fish that needed the room; it was their idea to raise more and bigger fish to improve the lot of anglers fishing Franklin County waters. And they didn't sit and hold out their hands with no effort in return. Under the leadership of John Mahon, club president, and Bob Klenzing, nursery manager, the work was expedited, fish transferred, and the business of raising trout continued.

Public notice of this total effort came at the annual club banquet on January 17, 1972. Dean Carey, Knouse president, and other Knouse officials received honorary memberships as a token of appreciation, as did other non-club participants. A dedication ceremony later in the year finalized the project made possible by the cooperation of many interested persons and agencies, proving once again that *Casting with the Co-ops* is a way to better fishing.



Think Like a Fish

continued from page 15

stream. He allowed his line and bait to float with the current and to sink slowly. In a few seconds he set the hook in a large bass.

The farmer repeated this process three times, then walked out of the stream and sat down beside us on a fallen log in the shade of a big tree.

"How did you do it?" my friend asked. "We've been fishing this pool almost an hour and got only a couple of half-hearted strikes."

"I got my bait to the bass," the farmer replied. "In the middle of this pool is a jumble of rocks (we had seen them but had not realized their potential) where the fish hide at this time of the day. I just let my bait float down into those rocks, and the bass did the rest. They were hiding in the rocks but couldn't resist the temptation of an easy meal."

An indirect approach to the fish—the system the farmer used to catch the bass—is best when fishing either a hiding place or a feeding station.

This system calls for the angler to make all possible use of stream currents. Do not cast directly under overhanging vegetation; do not try to get a bait or lure directly into the water beneath an undercut bank; do not attempt to place a lure in the middle of an eddy along a fast current.

Rather, study the path of the currents, then cast into them some distance upstream from the precise target area, and let the current carry the fly or bait to the waiting fish. In the shallow tail of a pool, cast the fly well above the spot where you suspect a fish may be lying or where you have observed a fish feeding, and again allow the current to carry the lure to the fish.

In a lake or pond, cast along the edges of lily pads and weed beds. If there is a hungry or belligerent fish lurking in the weeds, it will see the bait or lure and attack it, or at least investigate it.

There are times, of course, when casting directly into a bed of lilies or patch of weeds pays off, but the technique in such circumstances is to select an area where a lure can be cast atop lily pads or into weeds and then carefully worked into patches of open water that usually are to be found in such vegetation.

A weedless lure can be cast directly into submerged tree branches or tangles of logs, but working the water along the edges of such obstructions is equally effective.

No matter what the water situation, one cardinal rule must be observed. The bait or lure must be presented with the least possible commotion—after the angler has approached to within casting distance without

creating a disturbance in the water.

When you do that, you are still thinking like a fish. You realize that when the trout or bass is in its hiding place it is constantly on the alert and when it is on its feeding station, its protection likely is reduced to a minimum. No matter how hungry it is, the angler's slightest mistake in approach or in casting will alert the fish to danger and it will take flight.



NEXT MONTH—

Author Richard F. Williamson, a veteran Pennsylvania Angler, will begin a monthly series of short bits and pieces of fishing "know-how" that he's picked up over the years. No stranger to *PENNSYLVANIA ANGLER* readers, Dick Williamson recently completed 47½ years of journalism with the *GRIT*. Appropriately entitled, "The Angler's Notebook," the column will contain timely hints of special interest to fishermen each month.

Fishing Outlook

continued from page 3

type lures, 5 or so inches long in gold or silver and the jointed Vamp Spook in gray or rainbow colored.

Joe Sabat, one of a family of Musky fishing brothers told years ago of his method of skipping frogs. These brothers normally use canoes and when fishing alone, place a counterweight near the bow of the canoe to hold it more or less level. Rod holders are clamped to the gunwales of the canoe near midships, one on each side and just about opposite each other. They use collapsible hollow fibre glass rods that extend to 20 feet in length and a casting reel with drag attachment. Monofilament line, 20 pound test minimum, with a 20 inch length of wire leader constitute the terminal rig. Frogs (which measure 4 to 5 inches *when seated*) are the size they look for. One hook of the lead treble hook is put through the lower lip of the frog. The second treble hook is not impaled but is lightly wrapped on with sewing thread.

The rod holders are placed at about a 45 degree angle and the rods inserted. The line is extended so that the frog just skips over the surface of the water. The drag is set so as not to pull out while moving, yet

light enough to offer little resistance on a strike. Slowly the canoe is padded along; one bait skips along the shoreline or stumps or weed beds, the other works out in the slightly deeper water. Once the Musky rises to engulf the bait and disappears into the deeps, the waiting game begins. While the Musky is tasting, turning and savoring the frog, *you wait*. When he finds it to his liking and makes his second charge to force it down his throat, you rear back, set the hooks and the battle is on. Not only Musky, but quite a few citation sized Large and Smallmouth Bass have fallen victim to this method of fishing in western Pennsylvania lakes and ponds over the last dozen years or so.

At Tionesta year around camping is available. The overflow campground lies along Tionesta Creek below the spillway. There are six other camping areas along the shores of the lake. These are accessible only by boat. For information, write to the Reservoir Manager Tionesta Dam, Tionesta, Pa. 16353.

On October 14 and 15 the thirteenth annual Pennsylvania Fishing Tournament will be held along the Allegheny River from Kinzua to the Hunters Station Dam in the same area. A colorful brochure listing rules and regulations of the tournament,



Last year's "KING FOR A DAY" was Robert Divido of Nanty-Glo who won the two day competition with 12 bass and two walleyes for a total of 32 points. Meadville Tribune Photo by Ed Gray

prizes awarded and other pertinent information can be had by writing to Jim King, Chairman, Fishing Tournament, Tidioute, Pa. 16351. If you're anywhere near on these dates, be sure to stop by and take a look at some of the fish caught during those two days.

FISHERIES OFFICIALS of tri-state area meet at Pleasant Gap



N.J.-MD. FISHERIES OFFICIALS visited several Pennsylvania Fish Commission facilities on June 21-22 to obtain information on fish culture techniques developed by Commission experts. Shown here, during their stop at the Pleasant Gap headquarters of the Bureau of Fisheries and Engineering are, left to right: Frank Mankewicz, New Jersey geologist; Robert Williams, Superintendent of the Chas. O. Hayford State Fish Hatchery at Hackettstown, N.J.; Bruce Pyle, Asst. Chief, Bureau of Fisheries Management, New Jersey Division of Fish, Game and Shellfishes; Edward R. Miller, Director, PFC Bur. of Fisheries and Engineering; Ralph W. Abele, PFC Executive Director; Russell Cookingham, Director, N.J. Div. of Fish, Game and Shellfisheries; and Robert J. Rubelmann, Chief, Fisheries Management, Maryland Fish and Wildlife Administration.

FISH TALES

by Doris Katsonis



A Glassport youth, JIM BORUCKI, caught his 27 inch walleye while fishing near Espyville on Pymatuning Lake in June of 1971. He was using a C. P. Swing for bait.



WILLIAM NEWCOMAR, Age 15, of Woodlyn caught his 13 inch yellow perch from Lake Wallenpaupack using spinning gear and a nightcrawler for bait. This was also a summer of 1971 catch.



The big 32½ inch, 15 pound carp (left) is held by angler DAVID AULHOUSE of Columbia. BELL WEST of Jersey Shore holds his 10¾ inch rock bass (small compared to Dave's carp, but large for a rock bass.) Both were caught from the Susquehanna last summer.



BUDDY ALLEN, 14, of Bedford holds the nice 19 inch brown trout he caught from Meadowbrook Creek using a nightcrawler for bait.



DAVID AND BOBBY ROMAN of Nesquehoning hold identical large-mouth bass, 18 inches, caught at Promised Land Lake on rapalas.



STEPHEN BISTRANSKY (top photo) of Johnstown holds his 36½ inch, 22½ pound carp caught from the Allegheny with spinning gear and a crab while another proud angler, JIMMY SHAW (bottom) of New Milford holds his chain pickerel taken from the Susquehanna last winter.



These two happy boys, DAVID BARTCZAY and MARK MIOLIE of Pittsburgh display the 30 inch and 26 inch carp they caught from Cedarhurst Lake with spinning gear and doughballs for bait. Another happy carp fisherman, ERIC MARSON (right) also of Pittsburgh, holds his 30 incher taken from the Allegheny River while spin casting with a doughball.



RONALD SCHEIB (left) of Millersburg holds the 30½ inch channel catfish he caught from the Susquehanna at Millersburg on a rebel plug and EUGENE SHAW, SR. of Titusville caught his 31 inch catfish from the Allegheny in Forest Co. While casting with a chub.



TIONESTA WORM FARM



CHARLES WAGNER (above) of Jersey Shore holds the trophy musky he caught in February from Kinzua Dam, while FRED DASH of Erie holds the 26-inch coho he pulled through the ice at Chimney Pond. CHARLES WENTZEL (far right) of Waterville poses with friend, BASCOM LEGGETT, while holding his 21-inch smallmouth caught at Little Pine Dam.



Angler BRUCE MIDDLEKAUFF of Camp Hill caught his 21-inch, 5½ pound smallmouth from the Susquehanna with spinning gear and a bucktail and ROBERT V. SCHOELLER (right) of Fairview caught his 27-inch, 7-pound rainbow with rainbow spawn at Lake Erie.



A Sunbury youth, GUY MATREY, caught his 28-inch carp while spin casting with a worm in the Susquehanna River near his home. CYRIL MELLO (right) of Bellville, N.J., caught his 23-inch, 7½ pound largemouth from Lake Henry at Swoyers Grove.



ROBBIE BECK was trolling a mepps spinner in Lake Erie when he caught his nice 25-inch rainbow last October. It weighed 4¾ pounds. Robbie lives in Erie.



WILMER (BUD) MILLS, III, of Sharon is delighted with his catch of a huge 32-inch, 16 pound catfish from the Shenango River. He caught it on a nightcrawler.



A Tionesta angler, FORREST HALE, landed his 31½ inch, 12½ pound walleye while fishing the Allegheny last December. He was using spinning gear and a jig.



ANAKICH (right) gets help from KALMAN BERENIES to hold the 31 pound musky he caught from the Shenango River in February.

FOR OUR NEW SUBSCRIBERS

We receive many more photos than we can possibly publish and have limited the FISH TALES section to pictures of CITATION SIZE FISH ONLY.

Citation applications are available at sporting goods stores or from your local Waterways Patrolman.

IMPORTANT:

Citations are awarded for fish caught in PUBLIC WATERS ONLY! Waters must be open to fishing by the general public without payment of fee. Photos should carry complete information on the back—name and address, species, length, weight, when and where caught and the bait or lure used. Print plainly but do not press with a ballpoint pen—we cannot use photos with writing "showing through" or those which are cracked, blurred or poorly exposed.



Another huge musky, 45 inches-25 pounds is held by angler LARRY GINNOVAN of Middletown. He landed it from the Susquehanna River in December.

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Special Waterways Patrolman

Lieutenant Governor Ernest P. Kline, Coordinator of Civil Defense activities during the devastating flood of last June, is shown receiving his Special Waterways Patrolman badge and commission from Executive Director Ralph W. Abele in an impromptu presentation in the state capital.

Lt. Gov. Kline expressed his appreciation for the efforts of the Waterways Patrolmen and the Special Waterways Patrolmen who reported to Civil Defense for duty during the emergency.

Shown in the photo, left to right: Ralph W. Abele, Executive Director; Paul Martin, Chief, Watercraft Safety Division; Lt. Governor Kline; John I. Buck, Chief, Law Enforcement Division and Mr. Calvin J. Kern, immediate past president of the Pennsylvania Fish Commission.

On the Allegheny — **NEW BOATING ACCESS** *at TARENTUM*

by Paul A. Pavlik

Seven years ago a local councilman, Mr. Michael R. Davidek, had an idea—"convert a piece of land that was an eyesore to a very much needed recreational facility." With the help of the local recreation commission and council, the idea was presented to the Pennsylvania Fish Commission. The commission foresaw the need of the facility and agreed to finance the project.

Today the eyesore is gone. The photos (right) show the launching area and a parking lot for 40 boat trailers and vehicles, with a spill-over area for some additional parking. There is also a 30-foot mooring dock which can accommodate between 50 and 100 boats.

This area provides fishermen and recreational boaters with a very much needed facility on a very busy Allegheny River.



TAKING A CLOSER LOOK

by Tom Fegely



Watch out for those jaws! They can snap a finger like it was a twig.

SNAPPERS—

Dangerous and Delicious

The snapping turtle is well known to many Pennsylvanians: to bank fishermen as a nuisance, to herpetologists and students of nature as an interesting study specimen, to waterfowl propagators as an enemy and to gourmets as a *delicacy*. The snapper has been described as temperamental, sinister, dangerous, vile, mean, ugly and delicious. Those who've both seen and tasted *Chelydra serpentina* probably have a few descriptive adjectives of their own.

Most readily identified by its ridged tail and cross-shaped undershell, the snapping turtle is found in all types of fresh waters but seems to prefer sluggish ponds or streams with plant-infested bottoms. Poor swimmers, snappers typically wander about on the floor of their watery homes in search of food. Their diet includes fish, frogs, aquatic plants, carrion, invertebrates, young birds and mammals. Most prey is seized and swallowed underwater. Baby ducks and geese are a favorite on the snapper's spring menu. They, along

with small muskrats, are yanked beneath the surface, dragged to the bottom and elawed apart by the powerful forelegs before being eaten.

Seldom seen basking or wandering on land, except during floods, the female must leave her watery home to lay eggs. Mating occurs anytime between April and November with the eggs generally hatching in about three months. Some eggs winter over and hatch the following summer. Twenty to forty "ping pong ball" sized eggs are laid about five inches below the surface. The female usually chooses a sandy or loamy spot, exposed to the sun, where she excavates her nest using the rear feet. Often found a long way from water, the young get no parental protection and

The author displays a dripping snapper that was just yanked from its watery home.



must incubate and hatch on their own.

Although man is the snapper's main enemy, crows, hawks and large game fish eat the young and raccoons, skunks and foxes dig up the eggs. Seldom is a snapper caught that is not infested with a variety of leeches clinging to the soft underparts. Internal parasites also thrive in countless numbers in these turtles.

Twenty-five years seems to be the maximum age for the snapper. Size-wise, most people exaggerate the weight when describing the turtle they caught or saw. In the wild, snappers typically weigh fifteen to thirty pounds.

Years ago, farmers frequently fattened snapping turtles in swill barrels where they fed on buttermilk, mash and an occasional groundhog or grizzled, old rooster. Here they reportedly attained sizes upwards of 75 pounds.

A cousin, the alligator snapper of the South, dwarfs our large Pennsylvania snappers. The 25-inch shell of this monster protects an armored body frequently weighing as much as 150 pounds.

Should you happen upon an adult snapper, keep in mind that it can strike with lightning speed. Often the force of its strike will cause the shelled body to completely leave the ground. If it happens to connect, a chunk of missing flesh or an amputated finger could be the result. Despite its ugly looks and temperament, the snapper demands respect. Keep in mind that when teasing him he has nothing to lose . . . but you do.

The snapper can be readily identified by its ridged tail and cross-shaped undershell. This is also the only safe way to handle an adult.



Curtis Hilton,
of Sharon

found stormy weather was
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PENNSYLVANIA

NOVEMBER, 1972

Angler

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"Fishing Is Great!"

A number of times, on this page, we have directed your attention to the adverse effects the floods of Hurricane Agnes had on Pennsylvania's waterways. More specifically, we were appalled at the unnecessary damage done to many streams as a result of irresponsible "reclamation" projects and quite possibly left our readers with the impression that *fishing* has been damaged, or worse, *wiped out*. Except for some few localized situations, nothing could be farther from the truth! Inspiring catches have been reported from the Juniata and the Susquehanna Rivers, and we expect this to continue right through November, and for the hardy, well into December.

The Fish Commission's "losses" were significant; our hatcheries "lost" 130,000 fingerlings, 50,000 yearlings, and 11,000 brood stock, and many, many fish of the warmwater species were washed away . . . but not necessarily *lost*. Cooperative nurseries report another 176,000 trout swept away from the confines of their ponds and raceways . . . but again, not necessarily *lost*. These fish were in good shape at the time they were washed out into the streams beyond our control and there is no reason to believe that they are not thriving in their new environment. Call it an unscheduled stocking.

Immediately after the flood we contended that fish, above all creatures, would be able to take good care of themselves, and post-flood observations have supported our contention. Water is *their* element; and fish are accustomed to abnormally high flows—many times in the course of a single year. Except where the sources of potential pollutants were inundated, causing their release and mortalities in local fish populations, the fish in our streams survived and many of them spawned after the flood. We are particularly happy to report the observation of fingerling bass of an age class that had to be born since Agnes!

We're not trying to compete seriously for your time with our cousins, the Game Commission; we know that November fishing appears to conflict somewhat with hunting seasons. But think of the joys you experienced last spring; hunting for that prized gobbler in the morning, and fishing for trout in the afternoon!

Take that rod along with you when you go hunting. You might just "luck out" in your quest for terrestrial game and have some time left to enjoy Pennsylvania's streams in that relaxing therapeutic activity we call *fishing*.

Executive Director
RALPH W. ABELE



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REGIONAL HEADQUARTERS — BUREAU OF WATERWAYS

REGION I FRANKLIN Norman W. Sickles, Supervisor	REGION III SWEET VALLEY Clair Fleeger, Supervisor
REGION II SOMERSET Thomas Qualters, Supervisor	REGION IV ANNVILLE Miles Witt, Supervisor



STATEWIDE with the EDITOR

ON THE COVER, One of those tail-walking Smallmouth Bass which have made Fall fishing so attractive along Pennsylvania's rivers and streams. "Ounce for ounce, pound for pound, the gamest fish that swims" wrote an early Pennsylvania Angler and we're not about to debate that!

ON THE BACK COVER, We were fortunate enough to happen upon Tom Letko of Minersville, Pa., just after his 18" smallmouth succumbed to a live minnow in the Susquehanna River near the Swigarts Island access near Liverpool. Both from Ektachrome transparencies by the Editor.

Many years ago I read the results of a fishing survey conducted by one of the foremost *experts* of the day. His name has long since escaped me, but I've never forgotten one particular part of his report. It was his contention that the best fishing was available "after everyone had gone home." He referred both to *time of day* and *time of year*.

Among more serious fishermen, the *time of day* aspect is one of the most important considerations to be given to a *successful* fishing jaunt. It's just unfortunate that entirely too many newcomers to the sport will always remain novices until they change their thinking.

"What a beautiful day! Let's go fishing—we can be back in time for supper." Fishing trips that begin with some similar declaration can never be expected to be too fruitful. Granted, now and then Mom or one of the kids will tie into something big enough to cover a portion of the frying pan, but often as not, these anglers seldom do anything but contribute to the harvesting of our under-

sized panfish which never seem to go by either clock or calendar. Perhaps we shouldn't knock this—it's a necessary harvest. But they're missing out on some of the finest fishing in the country—right here in Pennsylvania. And you're a *ding-a-ling* if you try to convince them to the contrary!

Now I was fortunate enough to learn the rewards of evening fishing at an early age but still we went about it all wrong. Every *summer* we fished from the moment of arrival (just in case!) but all the while looking forward to the sun going down and the action to be expected just *before* dark. Never could figure out those characters who snoozed in the shade all day, sipping on a cold one now and then, waiting for the evening—especially those who had boasted of catching a six pounder, "just about daybreak"! There seemed to be little excuse for their stupidity, I thought, to waste the entire day when they could have been fishing. They knew the fish were in there! Of course, by the time the sun *went down* and the mosquitoes *came up*, WE'D HAD IT! Yep, we'd had enough fishing—but seldom a trophy fish.

Learning the rewards of Fall fishing took a little longer. In fact, many years longer. Unfortunately we were all members of the set that put the tackle away shortly after Labor Day. And fish in foul weather? Perish the thought!

Fortunately, many years now since reading that "expert's" report, I've joined the crowds that argue for either September, October or November! And from what I hear STATEWIDE, we'll soon be challenged by the December-January boys.

You'll want to read John Rex's "UNTAPPED RICHES" on page 6, if you're still not a believer. Photographer Eddie Gray, whose work interferes with a great deal of good fishing, found time to do a fine job in supporting John's yarn and our con-

tention that cold weather fishing can't be beat. (We feature his work on pages 6 & 7; one of his catches on page 12.)

Take ELECTION DAY, frinstance. I look forward to that day like a kid to Christmas! The "store" is closed and after casting *that* ballot, I'm off to the river where the *casting* continues until the elbow gives out!

Assembling my fall supply of spinners began back in August, which is no great time margin when you consider how many #3's I leave on the bottom each year. "Rollin' yer own" costs about one-fourth the over-the-counter price and reduces considerably the tears shed on each snag.

Don't let the mention of foul weather deter you. You can take a nice sunny November day and "make out like a bandit" with the smallmouth. Why not join the *converts*? I'll be there—generally in water about an inch over the hip boots—but I'll be there *on the Susquehanna*.

Try November smallmouth fishing, wherever you are, it's unforgettable fishing. Now and then a tourist will shake his head and mumble something about "a size 46 jacket and a size 3 hat," but pay them no mind . . . pay them no mind!

"Oh we do this every year," shouted the woman below when the Editor congratulated her on her catch from the Susquehanna River at Gertie's Notch, north of Amity Hall.



Ol' Esox Niger, the Chain Pickerel, is quite

"at home" in the lakes and ponds of Northeastern

Pennsylvania but few anglers would expect to

land him practically within Allentown's City Limits!



FISHING OUTLOOK

By-- Stan Paulakovich

Eastern Pennsylvania's Lehigh River, not one of the major rivers of the state, has been providing a fine fisheries resource in its lower reaches over the last few years. The Lehigh heads in Wayne County near Gouldsboro Lake. From its origin down to Walters Dam in Carbon and Luzerne counties it is an excellent trout stream and it is regularly stocked with this species.

From the Walters Dam downstream to the village of Lehigh Tannery it remains primarily trout water. Wide and fast flowing, it has excellent year round fly hatches. This stretch is one of the better little known trout waters in the state. Several miles below Lehigh Tannery the first of four acid mine drainage streams flow into the Lehigh. Water quality in this 16 mile run down to the town of Jim Thorpe is borderline, with very little aquatic life present. The placement of Yellow Boy acid neutralizing devices on two of these streams several years ago has helped and water quality is showing definite signs of improvement.

From Jim Thorpe downstream to Treichlers, about 20 miles, a marked

improvement in the water becomes evident every mile of the way. Fish life becomes more abundant as you proceed downstream. The small dam at Treichlers forms a three mile pool and from this point down will be the subject of this months' article.

Years ago when the anthracite mines were working full time, the Lehigh suffered horribly from coal siltation. The river ran pure black most of the time and a live fish was a rarity in the river. Dredgers worked the river from Palmerton down and took out most of the fine coal, but bottom life was almost non-existent. After the war years when the hard coal mines began to shut down, periodic high waters which swept the bottom and the fact that no more silt was coming into the river began to have its effect. As the river began to clean up, fishermen started to fish it near the mouths of clean streams. As their catches improved they gradually expanded their fishing areas until today the entire stretch is fished, although quite sparsely.

Sportsmen's groups from Jim Thorpe, Lehighton, Weissport, Slat-

ington, Walnutport and Treichlers areas have raised funds, purchased Trout and stocked them in this stretch. Nestors Sporting Goods store in Allentown has, for the past five years, tagged and stocked trout in this area as part of their fishing contest promotion. Much migration and a good return of these tagged trout has been noted in what we feel is basically a warm water stream. An experimental stocking of 200,000 Walleye fry in May of 1971 by W. P. Mussel of Lehigh County is being carefully watched for future fishing potential of the river. Water quality and temperatures are also being thoroughly checked to determine what kind of fish will be stocked later on.

Comes November, as water temperatures fall rapidly and snow flurries become part of the daily scene, local fishermen begin to concentrate on catching the one fish that has done remarkably well in the river—the Chain Pickerel, *Esox Niger*. Through November, December and into January, the more miserable the weather
continued on page 21

Larry Barner, in the photo, lower right, caught that 28 1/4" 6 pound chain pickerel in the Lehigh River just about one half mile downstream from the Hamilton Street dam, shown lower left. Better water quality, says Stan Paulakovich, is responsible for the terrific pickerel fishing available each year for late season anglers in the Allentown area.





HE'S A GAS!

I work in a sporting goods store in the Pittsburgh area. While at work last night I was talking to a customer who irritably told me that the water falling over the Kinzua Dam was producing (or was full of) an excess amount of nitrogen and this was killing warm water species of game fish.

He also told me that eventually, because of this alleged nitrogen situation, the warm water fish in the Allegheny River will not be able to reproduce.

Is there any validity to what this man is saying or is he full of "excess nitrogen"?

ROBERT N. ABRAMS, Bridgeville

"He" may be but the water falling over the Kinzua Dam surely isn't! Water falling over a dam dissipates the nitrogen and replaces it with oxygen. One of the fish culturist's "tools" in removing excess nitrogen from hatchery water sources is aeration. And they go to great lengths to accomplish what Kinzua's Dam does but, of course, on a much smaller scale.

However, large dams such as Kinzua, if they have a bottom discharge, will lower the downstream temperature to a point where the warmwater species depart and eventually are replaced by trout. Thus, the warmwater species are not "killed off"—merely replaced by species more adapted to the new prevailing temperatures. The effect of cold water discharges from the bottom of an impoundment may affect the river fishery for some distance downstream but eventually, especially along a river of the Allegheny's length, a normal order prevails.

Excess nitrogen will produce a condition in fish known as "Pop-eye" and as the name would suggest, the symptoms are rather easy to detect.

The fantastic trout fishing now available in the Kinzua Tailrace is certainly evidence of thoroughly oxygenated water—they wouldn't thrive without it. Ed.

ANGLERETTE

I would like to compliment the Fish Commission on the great job you

are doing. I am a girl, but I enjoy fishing (especially fly fishing) very much. Some things I would like to see more of are the Fish For Fun areas, a summary of streams and lakes by counties—telling how to reach them, the time of year the best fishing comes, best lures, fly hatches, and general history and interesting facts about the streams. The Fish Commission maps are of a great help.

Well, I am enclosing a check for \$2.00 for a one year subscription.

DARLA COTNER, Danville

Thanks Darla! We're going to send you some literature which will cover most of your needs. But "when to go?" Anytime Darla . . . anytime! Ed.

FOR ALL TO SHARE

In being permitted to read my husband's copies of the Pennsylvania Angler from time to time, have seen items that would be of interest to my fellow club members (rock, mineral and fossil collectors) and might be placed in our six page, duplicated newsletter, if permission would be granted. Would this be possible? Author and Pennsylvania Angler credited, of course.

Your "Statewide with the Editor" feature (April) deplores the graffiti encountered, and we certainly agree. There are also a number of people who have an erroneous impression of *all collectors* because of the outrageous behavior of some. Our club has membership in the American Federation of Mineralogical Societies, which espouses a code of ethics, a copy of this is enclosed. If you have the time to read it, you may find we do have something in common, the "preservation of our land and waters."

Thanks, whether permission is granted or not, for a fine magazine, which we women enjoy too.

RUTH HAAS, Cornwells Heights

How could we refuse? By the way Ruth, they tell me that our coverage of that particular area was responsible for a "clean-up"—Let's hope it's contagious elsewhere? Ed.

HAS IT ALL!

The Pennsylvania Angler has been in our home for more than ten years. I want to commend you on the beautiful covers of your magazine. Each one has a distinct quality in itself.

I feel that each article published in the Pa. Angler is important to some-

one. Therefore, the variety of subjects makes it a more interesting magazine.

Mr. Bashline's article of "Basic Fish Cookery" (Dec. '71) was most interesting and I have added this to my recipe file. Perhaps we can get more recipes in the 1972 fishing season.

Thanks to all of you for a year of excellent reading . . . "THE PENNSYLVANIA ANGLER HAS IT ALL!"

MRS. MICHAEL J. QUIGNEY
Sportfishing Tackle
Bethlehem

P.S. "Sportfishing Tackle" is a Blue Book Information Center. We know our customers appreciate the Pa. Angler as well as our help concerning the best fishing locations and boating facilities around the area.

POLLUTION INFORMATION

I am a student in Biology at Youngstown State University and I am writing in concern of your magazine, Pennsylvania Angler. It has come to my attention, after reading your last couple subscriptions, that there is a lack of information pertaining to and about water pollution. Although I feel most of the articles in the magazine are interesting and very informative, a monthly report on water pollution and what progress has been done to help solve this problem would be very beneficial to all your subscribers. Such information would give all your readers a chance to see what is being done about this severe problem and what steps are being taken to help this problem. I definitely believe that lack of interest in water pollution on the part of the public comes about out of lack of knowledge on the matter. Hopefully I look to your magazine to supply the public with knowledge on water pollution so that we all can take an active part in cleaning up our lakes, rivers, and streams.

GARY GAY,
Youngstown State University

You may be right Gary. That is, with regard to lack of knowledge. The Department of Environmental Resources' Bureau of Water Quality Management, P.O. Box 2351, Harrisburg, Pa. 17105, has a wealth of information available simply for the asking. A monthly report in the Angler would be impractical inasmuch as the magazine is assembled months in advance of the date of issue. Ed.

FLY TYER

I thoroughly enjoy every issue of the Angler and the variety of articles which help to make fishing enjoyable and more meaningful.

While I am not a fly tyer I do read every word of your Fly Tying articles and a thought occurred to me. Would it be possible to have the flies illustrated in color? I'm sure this would be extremely helpful to the guys who tie flies.

STEPHEN A. MIHALCIK,
Wilkes-Barre, Pa.

The cost would be prohibitive Steve. Ed.

A FISHING BOATER

I'd like to tell you I enjoy reading the "Angler." It is a wonderful magazine. I know there are some readers who think the Angler is just a fishing magazine and not for boaters but I have a boat that I use only for fishing. Therefore, in my opinion, it pertains to both!

GEORGE W. SCHLEGEL

FAITHFUL READER

This makes the second year I have subscribed to the Pennsylvania Angler and I would like to make this comment. I personally think this magazine is a magnificent monthly publication for either the novice or the seasoned angler and I just cannot comprehend all this interesting reading material and the abundance of information for twenty-five cents a copy! The Editor and staff of this magazine has my most sincere compliments for an outstanding job well done. Being a native of Penna. I spent my boyhood in Bedford Valley. This village is 15 miles south of Bedford, Penna. and just a few miles from Lake Gordon and Lake Koon. Here I spent many, many wonderful hours!

Why hasn't the Pennsylvania Angler ever mentioned more about these two clear sparkling impoundments? Even from Harrisburg it's only a couple hours drive to the most superb angling in the state. I have never been one of the lucky ones to land a trophy fish but believe you me there is some fishing in these two lakes! WWP William McIlnay and his assistants from Bedford have always done a beautiful job patrolling and helping out in what ever way possible. These men have their hands full every day of the week and when trout season opens—I have never seen busier men! No wonder they

have been tagged as the *Thin Green Line*.

I have saved every copy of the Angler since I began subscribing for it and each copy has a wealth of interesting information to the fisherman so keep up all the good work as I will be looking forward to my next issue of the Pennsylvania Angler.

I remain a Faithful Reader,
FREDERICK N. BLOOM,
Cumberland, Md. 21502

Keep the Faith Fred! One of these days we'll have something on your two favorite lakes. Ed.

NOSTALGIC BIT

Thank you for one of the best articles ever printed in the Angler.



LITTER'LY PIGS!

"How large is a small fish" brought a little warmth to an otherwise bleak winter day. It stirred thoughts of a little mountain stream where I first learned the magic of running water and trout. I still fish there quite often, and although I am no longer a little kid with a worm-baited hook being taught by my father, those glorious little fish still make my heart beat faster. I can remember the old beaver dam that has since turned to swamp. When it was in its prime the natives grew to unheard of sizes (11 to 14 inches with one old female that stretched out to 18). The dam is gone, but the magic of a tinkling brook and the fly eating laurels is still there. The fish are small, but sometimes, if the brook is smiling, a real lunker will rise to a well presented Adams and the sight of 10 inches of one of Nature's wonders is something to behold. The smell of the hemlocks and the snort of a deer adds to the tranquil setting. But 'progress' is taking its toll. They built a road across the lower reaches of the stream, and when you get down far enough you can hear the cars. Soon

I imagine little Kintz Creek will be changed and the trout who have tasted nothing but its sweet waters for endless generations will be gone; but until then, if you sneak up along the creek, you may see a figure swatting the backflies, trying to unpin his backcast from the laurels and learning just how big a little fish can be.

GARY M. COTTAGE, Bethlehem

FISHERMEN ONLY?

Having been retired for the past three years, I take great pleasure in fishing—my only pastime. But here is my gripe: At Youghiogheny Lake, Somerfield, there are hundreds of motorboats racing up and down the lake with one and two skiers trailing,

chopping up the waters, with one thought in mind—thinking only of themselves and to "heck" with those fishermen who would like to have a little enjoyment. Regardless the direction one goes it's the same story.

If one happens to have his boat anchored 100 feet or more from the shoreline you can always find the "smart aleck" who will pass between you and said shore at a rapid speed with a skier trailing behind.

Now then, don't say get "their license number from off their boat and report them to the proper authorities!" This might work if one is prepared to take care of himself, physically.

As I see it, the proper thing to do could be to set aside a place on the lake "for fishermen only," so they can enjoy a little peace and quiet.

I would appreciate hearing from others on this matter. Rivers, lakes and streams are for the public—not a certain few.

JOHN (JACK) HILL, Uniontown
We've got them Jack! Try fishing at Fish Commission and State Park Lakes where only electric trolling motors are permitted. Ed.



*You too can take bigger fish than
ever before . . . and during a
most unlikely season at that!*



Photographer EDDIE GRAY captured some fantastic fishing on film during the foulest weather on record—HURRICANE AGNES! The unusually heavy volume of water going over the spillway at Pymatuning Lake brought in schools of walleyes and white bass. ABOVE LEFT, Ben Robinson and Curtis Hilton of Sharon land a walleye while George Poff, Sr., ABOVE, strings on one more. BELOW, the south end of north-bound Ben Robinson who "had it" after eight hours in the wind and rain.



Carl Martin of Linesville ties on a "lead-head", the author's choice for foul weather angling.

With us today is a generation of young men, completely unfamiliar with an item dear to the hearts of their male forebearers. A victim of science and technological development, this handy little tool which contributed so much to so many is fast disappearing from the American scene and the medicine cabinet as a masculine toiletry article. I refer to the shaving brush. Those given to nostalgia and those anglers seeking something different will be happy to know that the shaving brush has been reborn in an altered form to serve the interests of fishermen.

Several years ago, certain happenings led to the crossing of my path with that of S. Carlyle Sheldon, affectionately known to many as "Tid." The career of this round, little man, whose energy is boundless and whose mind is as quick as a bear trap, covers a period of 36 years as an employee of the Pennsylvania Fish Commission, the Game Commission and



the Department of Environmental Resources. His contributions to programs involving law enforcement, fisheries management and conservation have been monumental.

While in his company one blustery, winter afternoon, with several hours to kill, he said, "Let's go over to the river (the Allegheny) and fish a while." Now, I love to fish and to this point it had always been with a feeling of regret that, come late fall, I put away my gear, thinking of the fishless months until spring. As I was pondering with surprise this little fellow's mid-winter fishing proposal, he went on, "The water is up about four feet and muddy. I think we might take a hundred pounds or so." This was pure nonsense . . . and I told him so.

With the patience born of years of dealing with many people and with quiet confidence that only experience can bring, he then gave me the story of bottom fishing with a bucktail jig and held up a lure, which bears a striking resemblance to a shaving brush, as you will note upon an examination of the accompanying photograph on page 28.

Putting a finger on the beginning of things is always difficult. At least, it is possible to refer to a couple of jigging pioneers whose findings and exploits contributed materially to the current popularity of this sport in the northwestern corner of our State. During the mid-fifties, Ed Gray of Meadville built what he called a weighted streamer fly for walleye fishing, which he loved to do. This affair had a lead head, built on a straight shanked hook, with bucktail dressing aft of the head. Fishing it slowly and bouncing it off the bottom produced walleyes for Ed from the very beginning. Refinement of the lure and continued use also produced muskies and a great variety of bottom feeders for him. The word of Ed's catches got around and soon he was sharing his jigs and technique with friends.

Also, in the mid-fifties, Gar Archer of Pleasantville was given a salt water, bucktail jig by a friend. To Gar, it was a monstrosity and he promptly stowed it in his tackle box. Months later, while fruitlessly fishing live minnows on an early winter's afternoon at the mouth of Tionesta Creek, he became bored with inactivity. Deciding to cast a while, and rummaging around in his tackle box for a lure, he came upon the forgotten jig.

As he puts it, he tied it on and "monkeyed around with the fool thing." The "monkeying around" promptly produced two walleyes and Gar was hooked. He started to make his own jigs and learned to use them with great success. When he took fourteen good muskies in two weeks' time, the feat was publicized and the rush was on. Today, Gar is a living legend as a jig fisherman.

Getting back to that winter afternoon, we went "over to the river," Tid having first outfitted me with gear and stopped along the way to pick up one of his jigging partners. All the time I keep thinking about his "hundred pounds or so" of fish. Before the afternoon was finished, however, "Tid" Sheldon had made his point and I was a believer. The details of the catch that day are lost in a tangle of memories of many subsequent jigging sessions in the Allegheny and the Susquehanna and of many fish, but I recall one good muskie, several walleyes (I took three on three successive casts) four or five big carp, a number of carp-suckers or quillbacks and two or three red horse suckers to about eight pounds. Let the record show that I am grateful to "Tid" for having introduced me to a type of off-season fishing I knew nothing about and which has since resulted in my having some great sport and enjoying some fine fellowship.

The "big fish" encounters by members of the jigging fraternity have been many and some have been so unusual as to provide exciting stimulus to the imagination. One in particular merits attention here. Selly Almon, owner and operator of a sporting goods store in Meadville, is a fine sportsman and the good friend of a host of outdoors people in northwestern Pennsylvania. Not long ago, Selly had an unbelievable fishing experience. Working from a boat for crappies, off the edge of a weed bed in Conneaut Lake, with an ultra-light spinning rod, four pound test line and 1/64 ounce jig, he "hopped" into a solid strike. As the fish bolted toward deep water (in reconstructing the whole affair after the excitement had died down, Selly realized that here is where the fish made a mistake which proved to be fatal), he knew he was fast to something far larger than a crappie. When the fish made the first of its three wild jumps, Selly says his heart did flip-flops. It was

continued on page 28



Above, Selly Almon displays his 38 inch, 16 pound muskie taken with ultra-light spin tackle —four pound test line and the 1/64 ounce jig shown below!



Above, "Tid" Sheldon, former Regional Supervisor in the PFC Law Enforcement Division, proves a point with his 14 pound 5 ounce walleye caught on a home-made jig while below, Eddie T. Gray, just about the "fishin'est photographer," holds up "about 35 pounds of walleyes" from Tamarack Lake.



Two cuties display some real beauties

to support Roger Kenyon's contention that Lake Erie is far from finished!



Below, Mary Jo Schafer, secretary at the Walnut Creek hatchery, holds a 33 inch 18¾ pound Chinook Salmon caught in experimental nets set about three miles east of Erie in 33 feet of water. (Apparent origin of the chinook was Lake Huron.)

Left, pretty Margie Hayes holds up a trio of Lake Erie "lake-run" Rainbow trout she caught in Twenty Mile Creek. Margie's fish ranged from 16 to 24 inches.



The composition of the fish populations has changed since the turn of the century. This change has been quite dramatic and has stimulated the most recent rumors that Lake Erie is destined for an early "death." However, as we advanced earlier, this is an inadequate and erroneous description of the changes experienced by the lake's ecosystem. The continued commercial and sport fish landings recorded (in excess of 30-50 million pounds annually) give little support to the proponents of a dead Lake Erie.

by Roger Kenyon, *Aquatic Biologist*
Lake Erie Research Branch

PART II

LAKE ERIE

*CHANGING . . .
but not dying!*

The first of this series of articles discussed the varying roles played by some physical and chemical elements in the aging process (eutrophication) of Lake Erie. Recalling that the Lake is differentiated by three separate basins which are characterized by distinctive ecological and environmental features, it will be seen that there will be a relationship between the changing ecology of the basins and their respective populations of fish and other organisms.

Among those whose livelihood it is to harvest the crop of fish available from one end of the Lake to the other, the productivity of Lake Erie is renowned. The commercial harvest has ranged from 76 million to 30 million pounds annually since 1915 and has often equaled the total production of the other four Great Lakes combined. Moreover, the variety of the species of fish comprising the catch of the last fifty years is indicative of the diversity of habitats and elevated level of productivity unknown in the other Great Lakes.

The history of the changes in the composition of the fish populations of the Lake have been directly related to the demands of man himself. The demand for high value fish foods and the demand for an economic disposal of the wastes of an industrialized, urban society, the need for intensive farming and agricultural methods and the demand for water as a source of energy have affected habitats and habits of the Lake's fish life.

The deeper, colder, well oxygenated waters of the eastern basin resemble

and are somewhat characteristic of the habitats of the other Great Lakes. Instead of *eutrophic*, these Lakes are considered to be *oligotrophic* ("scant food") in terms of their biological production. Their fish populations consist of *stenothermic species*, i.e., fish that are obligated to live in cold, generally deep, well oxygenated waters. Lake trout, ciscoes, whitefish, deepwater ciscoes or "chubs" and round whitefishes fall into this category.

The western and central basins of Lake Erie are, of course, considered quite eutrophic and the fish species associations are dominated by warm-water assemblages composed of yellow perch, walleye, suckers, whitebass, panfishes, drum, various catfishes and carp.

Historically, the eastern waters of Lake Erie sustained lake trout, whitefish, and cisco, locally referred to as "herring," the only members of the aforementioned stenothermic fish which had dominated the upper Great Lakes fishes. These species, however, apparently never achieved full stability in Lake Erie. Lake trout were never very abundant. Lake trout require from 5 to 11 years to mature because of their slow growth and consequently a population may experience difficulty in reestablishing itself subsequent to a period of low abundance. Because the species was limited to the relatively small area of deep water in the eastern basin, it was quite vulnerable even to the weak and crude commercial fishery of the late 1800's. For these reasons, the marginal lake trout population of

eastern Lake Erie was drastically reduced by the turn of the century. The survival of recent plants of lake trout by the Fish Commission gives support to our thinking that environmental conditions remain satisfactory for the lake trout and, with proper management, the species could again be a part of eastern Lake Erie.

HISTORY OF WHITEFISH AND CISCO (Plate No. 1—next page)

The changes of these two related, valuable food fishes followed a similar course in Lake Erie. Both species require relatively cool water to successfully sustain themselves, the whitefish requiring the colder environment. Despite their abundance in the Lake, these fish were generally restricted to the colder environs of the eastern basin after the 1900's except during their spawning period in November and December. Throughout their recorded history the species demonstrated instability in abundance—years of abundance were followed by years of relatively low numbers. Vacillating strength among generations (year classes) was due in part to environmental changes.

You will recall the increased rate of eutrophication in the western basin; its manifestations initially apparent in the 1920's. The cisco failed to produce successful year classes subsequent to this period (except during the mid 1940's) and the effects of increased eutrophication may have unfavorably altered conditions required for successful spawning and survival of young. The cisco today is a rarity and unless ideal conditions

continued on next page



Reproduced from: "The Report of The State Commissioners of Fisheries, 1892-93-94."

"From five to six men constitute the crew of a fishing steamer and include the following: Captain, engineer and three or four deck hands; three deck hands is about the average.

"The average pay is as follows: Captains receive \$18 per week, engineers \$17 and deck hands \$12."

LAKE ERIE CHANGING . . . *but not dying!*

continued from preceding page

prevail over spawning grounds for many consecutive years, the species probably will never attain pre-1920 abundance.

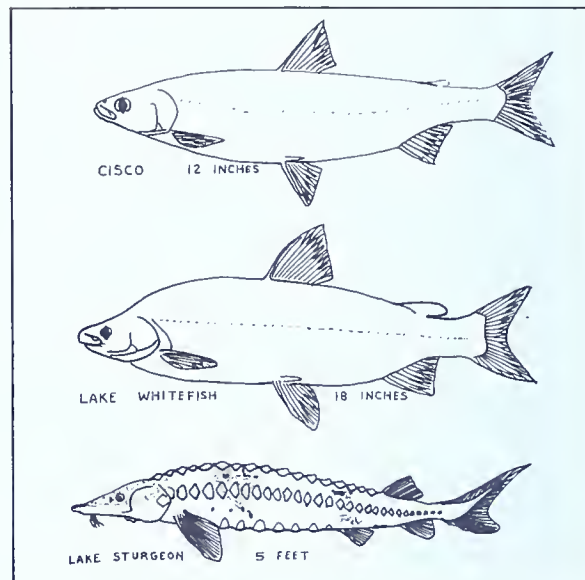
The whitefish egg relies upon a narrow range of extended cold water temperatures for development. Large numbers of whitefish eggs failed to hatch or the fry that hatched suffered a severe rate of mortality in experiments in which embryos were incubated at varying degrees of water temperatures above 42°F. The large variation in hatches and success of whitefish year classes that was observed throughout the history of the whitefish population may be related to unfavorable temperatures during incubation of the egg.

Consideration should be given to the fact that the Lake Erie whitefish is at the southern most limit of its North American range. For a species that required a cold environment, it should be expected that some form of biological stress would be imposed upon the population under such circumstances. Even though whitefish adapted to the Lake Erie habitat subsequent to the icecap recession 10-12 thousand years ago, its present habitat should be considered marginal and may be responsible, in part, for the failure of whitefish to maintain levels of abundance known in earlier years.

The surveys of the Pennsylvania Fish Commission have revealed that whitefish are more abundant than once thought. During certain periods of the year several age groups of whitefish are vulnerable to experimental trawls indicating reproduction has not failed entirely. Also, these fish are restricted to isolated areas in fairly dense schools thereby making the population very vulnerable to the nets, especially in years of low abundance, although fishing for whitefish was still profitable. Such situations might have added additional stress to the population and contributed, in part, to the decline of the stocks or the variability in year class production.

Destruction of spawning habitat also had a marked effect upon another species, the Lake Sturgeon. Here is another species that matures after a long period of slow growth,

PLATE NO. 1



anywhere from 10-20 years. This remnant of prehistoric times prefers shallow, rich, clean habitats—those areas characteristic of the western and central basins before the accelerated changes of eutrophication were observed. Spawning was concentrated in marshes and in the low gradient streams and rivers tributary to the western basin. Dams, siltation and pollution destroyed these areas as far as suitable spawning and ready access to these sites was concerned. Adult sturgeon were also destroyed by spears, clubs etc., while the fish were on their spawning grounds and because they easily ruined standard commercial gear, the fish were destroyed when caught rather than released. Undoubtedly, however, the changing features of its habitat had the greatest impact upon the species' welfare. Sturgeon had been greatly diminished in Lake Erie by the turn of the century.

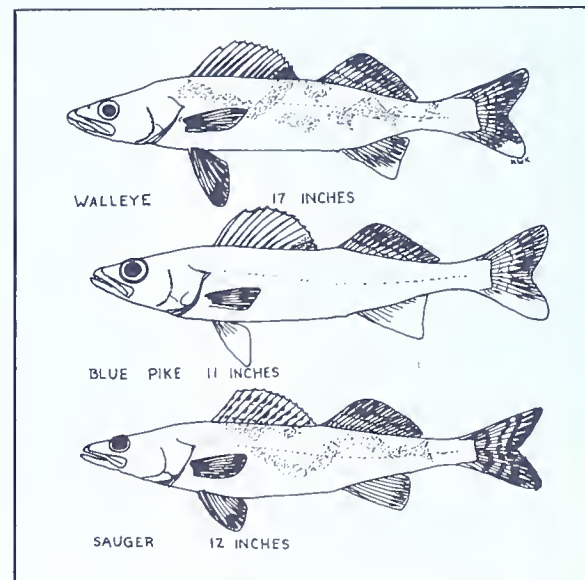
HISTORY OF THE PIKE-PERCHES: WALLEYE, BLUE PIKE AND SAUGER (Plate No. 2)

These three closely related species

were suitably adapted to the shallow water habitats of Lake Erie and, except for the blue pike, prospered in both the central and particularly, the western basin. Before, and immediately subsequent to the turn of the century, walleye were not exploited very heavily relative to the high valued species of whitefish and cisco. After the decline of the latter two species, walleye became more in demand as a marketable item. Blue pike were intensely fished after 1900 and the sauger, important in commercial landings and rather abundant in the western basin before 1915, became commercially extinct by the mid-1950's.

The sauger was essentially a western basin inhabitant. Its steady decline was attributed to the increasing development of eutrophy in the western end of the Lake. The preferred streams, rivers and shoreline areas used for spawning became covered with silt and organic sediments, polluted or made inaccessible because of dams. The commercial harvest must have had some impact as well since the history of sauger declines began

PLATE NO. 2



years before the species habitat began to change seriously. However, the drastic changes in the western basin sauger habitat have since precluded any return of this species to its former status.

The walleye, always a valued commercial and sport fish, in Lake Erie has experienced fluctuations in abundance. The fluctuations became more pronounced after the 1930's. Presumably, environmental stress due to eutrophication may have initiated some of the long term annual decreases in year class strength. Periods of de-oxygenation of the hypolimnion, destruction of spawning reefs due to sedimentation and siltation, the appearance of smelt as an effective predator on young fish and an increasing, more effective, commercial fishery and demand by urban markets may have been responsible factors.

At any rate, the observations of sig-

sults. In fact, the latest strong year classes have been correlated with favorable temperatures during and subsequent to spawning.

Despite the vacillation of western walleye stocks, the eastern basin walleye remains fairly healthy and stable. Recent studies show that the walleye of the eastern end of the lake never interact with the walleye of the western basin. Also, the eastern population produces relatively stable year classes; there are more age groups in the population, growth is slower and other biological differences distinguish the eastern fish from the western stocks. The continued abundance and stability of the eastern stock is attributed in part to the lack of an accelerated eutrophication in the eastern basin.

The blue pike is considered a subspecies of the walleye group of fishes. Apart from its distinctive coloration,

cessfully in the face of exploitation since the early 1900's. The complete failure after 1954 of blue pike year classes suggests an additional, dominant, biological stress upon the population.

Large scale breakdown of the oxygen system in the central basin may have forced the blue pike into the eastern basin where they become heavily concentrated and more vulnerable to fishing during the 1950's. Catch statistics seem to give some measure of support to this. Concurrently, for unknown reasons, the blue pike were not reproducing young fish despite the abundance of brood fish. The population began to show reduction in numbers by the late 1950's and a consequential increase in growth rate. This led to a quite rapid removal of immature fish by the fishery which by now (1957, 1958 and 1959) was limited due to the very poor year classes of 1954, 1955, and 1956. Although there is no one reason for the rapid decline of the blue pike after 1960, the situation just described was initiated by an apparent environmental stress.

The smelt, considered to be quite predacious, could have been partly responsible for blue pike decline in that the two species occupied the same water and young blue pike surely would have been exposed to large numbers of voracious smelt for several weeks after the blue pike had hatched.

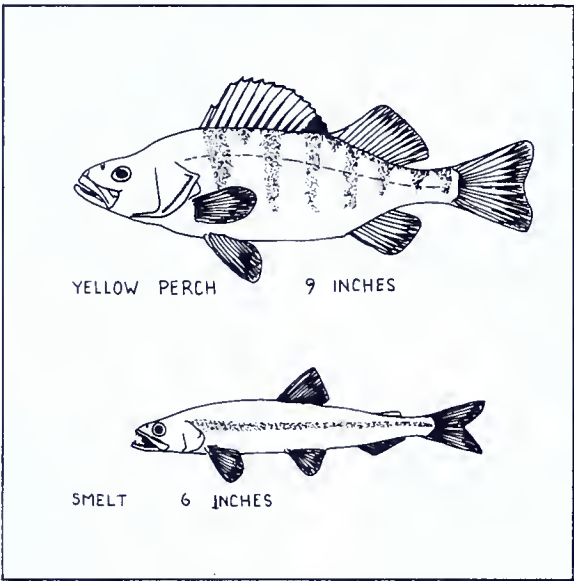
YELLOW PERCH AND OTHER SPECIES (Plate No. 3)

As was true with the walleye, the related perch has been an important species in Lake Erie but increased in stature when the high value species, whitefish, cisco, and blue pike were reduced. In recent years its abundance has been threatened by poor hatches and failures in recruiting strong year classes, particularly in the western basin. The eastern basin perch stocks apparently are more stable; much similar to the healthy eastern walleye populations. Environmental problems and an intense sport and commercial fishery in more western waters is acclaimed to be the cause of the problems in this area.

The freshwater drum or sheephead has apparently benefited from the process of eutrophication as has such species as the common sucker, carp, smallmouth bass, channel catfish, white bass and other panfishes. These species, if they have not increased in

continued on page 32

PLATE NO. 3



nificance were the decreasing length of time that a given brood year, or year class, would remain in the population of walleyes. Apparently the walleye was growing faster and the female fish, particularly, were limited to fewer years to participate in spawning. The commercial (and sport) fisheries were then removing fish at an earlier age, providing an added stress to the population's ability to reproduce.

Water temperature during the spawning period has recently been discovered as a factor having noteworthy effects upon year class strength of western basin walleye. When early and gradual warming of the water gains an early hatch of walleye eggs and presumably the effects of storms and predation upon eggs is reduced, a stronger hatch re-

there are differences in growth rate, head measurements and preferred habitat. The blue pike was essentially an eastern basin resident although its range also extended into the deeper waters of the central basin. In general, the fish selected deeper water than its relative, the walleye.

Since the early 1960's the blue pike has become almost extinct. Its only known natural ranges were limited to eastern Lake Erie, southern Lake Huron and western Lake Ontario; these populations disappeared at about the same time. Like the walleye, the blue pike's abundance in Lake Erie fluctuated dramatically. The causes for such fluctuations are obscure. An intense commercial and sport fishery for the species probably shared some impact upon the population but the species continued suc-

TROPHY CATCHES . . .



*like the Northern Pike
of avid angler
Senator Donald O. Oesterling,
Majority Caucus Chairman . . .*

*and the Muskellunge of
Eddie Gray, Meadville Tribune
Staff Photographer . . .*

*will soon be
“run-of-the-mill”
at Lake Marburg,
so predicts Biologist John Selcher*





LAKE MARBURG

By John Selcher —

Where records
are going
to be broken!

*Fisheries Biologist
Management Section*

Lake Marburg, located in Heidelberg, Penn, Manheim, and West Manheim townships in York County, is a 1275 acre reservoir impounded in 1967 and owned by the Pennsylvania Department of Forests and Waters, now incorporated into the Department of Environmental Resources. The Lake is located approximately five miles east of Hanover and is crossed by Route 216.

Lake Marburg has some unusual physical and chemical characteristics. The lake has a maximum depth of at least 105 feet and an average depth of 40 feet. Because of mixing prompted by rapid draw-off at a depth of 70 feet by the P. H. Glatfelter Paper Company, the dissolved oxygen content of the lake water is sufficiently high to accommodate the needs of fishes down to 70 feet at Station 1, located near the dam. Chemical analyses at subsequent locations progressively distant from the dam demonstrated that the column of water containing sufficient dissolved oxygen to support fish-life decreased to about 30 feet at Station 3. The expanse of Lake between Stations 3 and 5 sustains fishes from the surface to approximately 30 feet during the summer. The regions of the lake unaffected by the mixing effect of the draw-off have dissolved oxygen profiles more typical-

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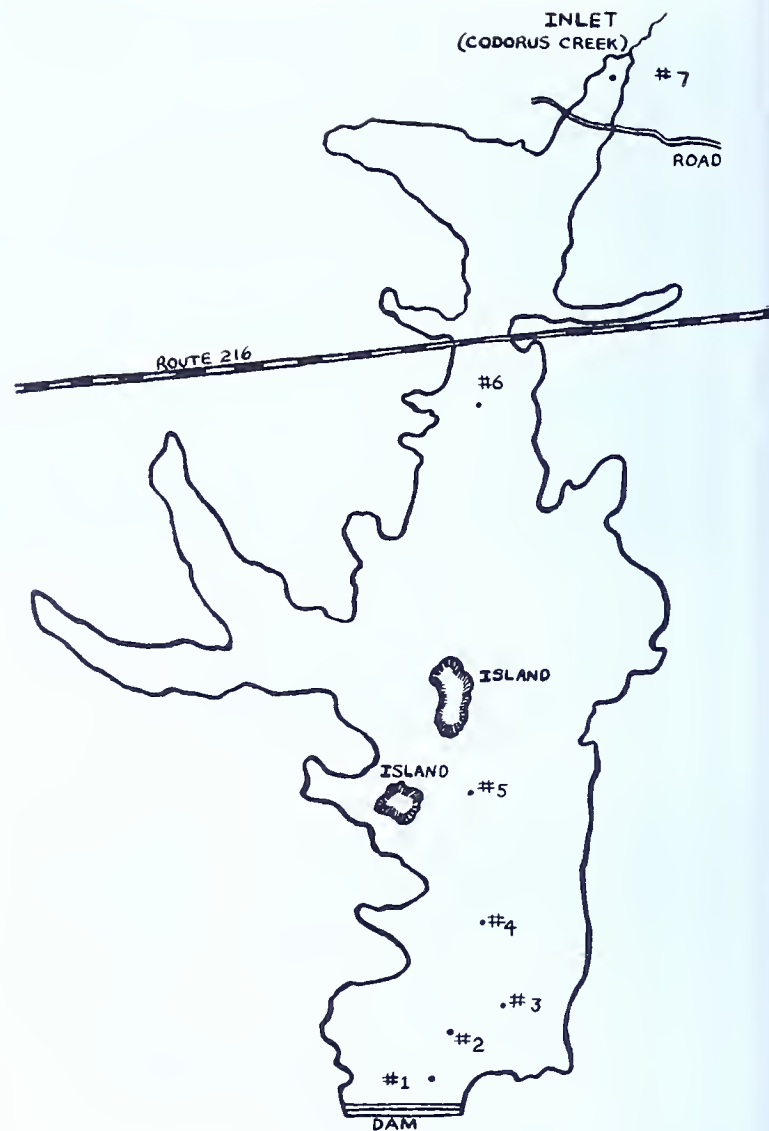
LAKE MARBURG

continued from preceding page

ly encountered at other lakes—the dissolved oxygen concentration becomes too low for fishes below depths of 15 to 20 feet.

The biological data collected from Lake Marburg during a 1970 lake survey may not be terribly impressive to most readers. No incredibly huge specimens were collected, but one important fact is not readily apparent. The lake had been in existence for only three years when the survey was conducted.

How would the results of a 1972 survey differ from the 1970 survey? We believe that Lake Marburg now contains more trophy fishes than any other lake in the Commonwealth of similar size. What data backs up our rash contention? According to Waterways Patrolman William Hartle, during the 1971 season a 39.5-inch northern pike was caught by a fortunate Marburg angler. There were many northern pike caught over 30 inches long. The four-year-old 39.5-inch fish suggests that a new state record northern pike may very conceivably be caught from Lake Marburg this season. According to data collected in 1970 during our survey and additional data provided by Mr. Hartle, the yellow perch, black crappie, wall-eye, and muskellunge are all growing at extraordinary rates. Anglers departed from Lake Marburg with stringers of black crappies measuring 11 to 15 inches. Walleyes stocked in 1970 at an average weight of two pounds returned to anglers in 1971 at weights of



THERMAL AND CHEMICAL DATA

Depth Feet Surf.	Temp. °F.	pH	M.O. ppm	D.O. ppm	Depth Feet Surf.	Temp. °F.	pH	M.O. ppm	D.O. ppm	Depth Feet Surf.	Temp. °F.	pH	M.O. ppm	D.O. ppm
1	74	8.1	37	8.7	25					49	47.5	6.9	36	6.8
2					26					50				
3	74	8.5			27	58			6.1	51				
4					28					52	47			6.6
5	74	8.1	38	8.5	29					53				
6					30	56	7.1	37	4.2	54				
7					31					55	46.5	6.9	38	6.8
8					32					56				
9	74	8.2	37	8.6	33	53.5			4.4	57				
10					34					58	46.5	6.9	38	6.6
11					35					59				
12	74			8.6	36	51.0	7.1	38	5.3	60				
13					37					61	46.0			6.2
14					38					62				
15	74	8.4	38	8.8	39	50	7.1	37	6.0	63				
16					40					64	45.5			5.0
17					41					65				
18	72.5			7.9	42	49.5				66				
19	71.0				43	49			6.5	67	44.5			3.4
20	68.0				44					68				
21	63.5			7.6	45	48	7.0	36	6.4	69				
22					46					70	44.5	6.8	39	3.6
23					47									
24	61.5	7.2	38	7.7	48									

pH—a measure of the acidity or alkalinity of water. The usual range is 6.0 to 9.0 although in unusual circumstances acclimatized fishes can survive at a lower or higher pH.

M.O.—(Methyl Orange Alkalinity) a measure of the buffering capacity of water. Up to 40 parts per million of buffering agents (mostly calcium bicarbonate), the higher the M.O., the more productive the lake.

D.O.—a measure of dissolved oxygen expressed in parts per million. Most warmwater fishes require a minimum of 3 parts per million.

PHYSICAL DATA

Natural _____ Artificial _____ X
 Topography (%): Mountainous _____ Hilly 100 Rolling _____ Flat _____
 Land Cover (%): Hardwoods 50 Conifers _____ Pasture 50 Crops _____ Marsh _____
 Drainage Area 24.3 sq. mi., 14,352 acres. Lake area 1275 surface acres
 Maximum depth 105 feet. Average depth 40 feet
 Shore profile: Steep X Moderate _____ Gradual _____. Shore development ratio ____:____
 Nature of bottom (%): Bedrock _____ Boulders and rubble _____ Sand and gravel Muck 100
 Boating X (Motor X Non-motor X) Other See special restrictions
 Accessibility: Good X Fair _____ Poor _____ Toilet X Livery X
 Public fishing facilities: Parking X Boat launching X Boat mooring X
 Fishing intensity (heavy, medium, light) Summer Medium Winter Medium
 SPECIAL RESTRICTIONS: (Boating and/or fishing) No motors over 6 hp.

BIOLOGICAL DATA

Species Name	Total No.	% of Catch	Catch per Hr.	Growth Rate			Size	
				Poor	Ave.	Fast	Ave.	Range
Black Crappie	78	11.24	0.39			X	7.7	3.7-10.3
Bluegill	509	73.34	2.55			X	4.2	2.2- 7.8
Brown Bullhead	15	2.18	0.07				8.9	8.1-10.2
Pumpkinseed	58	8.30	0.29			X	4.7	2.5- 7.2
Yellow Bullhead	8	1.20	0.04				7.8	7.6- 8.0
Walleye	1	0.15	0.01				18.8	18.8
Northern Pike	1	0.15	0.01			X	15.5	15.5
Largemouth Bass	3	0.44	0.01			X	7.7	4.7-12.3
White Crappie	21	3.03	0.10			X	8.0	5.6-10.4

four to five pounds. A muskellunge was captured and measured roughly at 50 inches before it flopped to freedom! Five witnesses substantiated this catch. The growth rates of all these species promise that additional state record fishes may very well be present in Lake Marburg. Even a world record fish would not be out of the realm of possibility.

The extraordinary growth rates demonstrated by Lake Marburg fishes are characteristic of the fishes of newly-impounded reservoirs. The *availability* of food is one of the most important factors determining the growth rates of fishes. Food supply in newly-flooded impoundments is not limiting because the living weight of the fishes per acre is far below the number of pounds per acre these lakes can support. After the fishes reproduce successfully for a number of years, however, the initial void becomes filled, and the growth rates subsequently decline at least partially because of the decreased availability of food.

The readily available food supply of Lake Marburg produces rapid growth rates of all of the fish species in the lake. Admittedly, the probability of catching a trophy fish (citation size) is low and that of catching a state record specimen is far lower still, but of all the lakes in Pennsylvania, Marburg very likely provides an angler and his family with the best chance of catching a truly extraordinary specimen. 1972 and 1973 should be vintage years for Lake Marburg anglers, so be sure to include this lake in your fishing itinerary.

Lake Marburg is the second of a series of lakes surveyed by the Pennsylvania Fish Commission to be described in the "Pennsylvania Angler."

Our objective is to make data we have collected available to the fisherman with hopes that his fishing enjoyment and success will be enhanced.

Before too many anxious anglers write, requesting specific information about their favorite lakes, we should state that we regretfully cannot perform this service because of the lack of manpower and the time required to process our data and present it in an understandable form.

Instead of waiting for a report on your favorite lake, why not sample the fishing at one of the lakes we describe?

Pontoon boat explores one of the many small "arms" of Lake Marburg. These little bays afford the angler shelter when high winds make fishing on the main body of the lake unsafe. Then too, they're great spots for late evening fishing when the gamefish head for the shallows on a feeding spree.





Home

by Robert Toolan

is the fisherman

The placid little farm pond seemed unaffected by the passing of so many years. Standing on the crown of the hill I gazed down at the tiny lake set against the rising mountains. Many times, in my boyhood days, I had walked from the little white farm house below up over the hill to the pond to take fat bullheads and pickerel from its productive waters.

I remembered it well. The two intervening decades had not dulled the vividness of such treasured memories. I could still see myself trudging up over this very knob, a long cane pole over my shoulder and a tin can full of night crawlers hanging from my belt. These juicy offerings tempted many of the denizens which prowled the coves of my fishing hole.

Seated against a massive oak, a restless Brittany by my side, I re-lit a well worn briar and looked upon the

countryside with eyes of gladness. As an outdoor writer for a large metropolitan newspaper, I have frequented numerous hunting and fishing hot-spots. These experiences have provided good copy for my readers, yet none of these adventures moved me in the same way as did this homecoming.

Homeward bound after a successful New England woodcock hunt, I could not resist the opportunity to visit Grandpa's old Wayne County homestead. Beloved memories swelled within me. Recollection of the second summer vacation spent on the farm with my grandparents came quickly to mind. I doubt if I'll ever forget it. . . .

The day had a special meaning to me for a two-fold reason. It marked the first time that Grandpa allowed me to take the boat out on the pond

alone. More important to me, it was the first experience I had with a really big fish. Previously, my fishing, when unaccompanied, was limited to sitting on the weathered dock, long since gone, that extended a short way out into the lake. Here I would sit, hours on end, fishing for perch, sunfish or an occasional bullhead—little boy's fishes—with my cane pole and worms. Constantly my mind drifted. I pictured myself out there in the middle of the six acre pond hauling in fish after fish, each of bragging stature. If only I could get out there. I couldn't even walk around the pond. A large swamp completely bordered the east side, and the forest met the water line on the opposite shore. You couldn't throw out your line with all the trees and bushes in the way. Yes sir, what I needed was a boat. Next to me, not four feet away, was the big

One time, Grandpa's bobber twitched once, then plunged under the surface. The old man reared back . . . all heck broke loose!"

scow Grandpa and I used on our fishing exploits. Yet I was too young to take it out alone. The situation was enough to frustrate anyone so young and impatient.

Yet I was contented. Living in New York City year'round, I welcomed the month I spent each summer on Grandpa's Wayne County farm. I loved to fish and Grandpa took me out in the boat whenever he could take time out from his chores. Dad didn't like to fish. He said he never had the time and, living in the city, we were too far away from any good fishing areas.

Many times, in the evening, Grandpa and I walked over the hill behind the house to the pond. Together we fished for bullheads by lowering a wiggling night crawler to the bottom. Grandpa was a good fisherman and more often than not we returned home in the summer darkness laden down with a pail full of fat bullheads.

Occasionally we would latch on to a scrappy, slender pickerel and if it was large enough, we'd keep it.

"How come we don't fish for them, Grandpa?"

"Pickerels is too dang boney fer good eatin', boy."

If there was one thing Grandpa liked better than *catching* fish, it had to be *eating* freshly caught fish.

"Bullheads make fer better eatin', boy. Besides, I kin ketch me a mess a lot quicker than pickerels."

One night, after a heavy afternoon thundershower had stilled the pond, Grandpa and I anchored off the point near the far end of the swamp. We caught four or five nice bullheads in no time at all. One time Grandpa's bobber twitched once, then plunged under the surface, headed for parts unknown. The old man reared back on his cane pole and all heck broke loose. The water exploded as the huge fish thrashed about on the surface. A series of quick dives for the safety of the weed and log strewn bottom followed. Grandpa played the fish quite skillfully with the crude tackle he used, but to no avail. Once again the fish came to the top to do battle with the aged fisherman. This time, however, Mr. Pickerel emerged as the victor. With vicious shakes of its head the fish threw out Grandpa's

hook. I nearly broke into tears! It was the biggest fish I had ever seen on the end of a line but Grandpa just chuckled.

"Now there was a real fine pickerel, boy. He'd have made a pretty good meal. Now let's git back to ketchin' us some bullheads."

I could have cared less about the fish as a meal—or for bullheads either. From that moment on, I was addicted to pickerel. I had to catch one of those lunkers for myself. Perhaps not as romantic as the trout, as popular as the big mouth bass, or as elusive as the silver salmon, the chain pickerel proved worthy of all my attention.

The next few days I didn't fish at all. Who could be satisfied with small perch and sunfish knowing there was such a monster out there waiting to be caught? I grew more impatient and fidgety. Grandpa must have sensed that something was bothering me . . . he was good at things like that. The thoughts of the big pickerel haunted my mind.

"Somethin' on yer mind, boy?" he quizzed me one evening at supper.

"It's that big pickerel you lost the other night, Grandpa. I want to catch one like that myself. Are there a lot of big ones in the pond?"

"I don't fish fer 'em much myself, boy, but let me tell you somethin'. There sure are some dandies in that pond."

I pleaded with the old man.

"Why don't we fish for a big one, Grandpa? I'll bet we can catch one."

"O.K. boy," he answered, "We'll go down on Saturday mornin' and try fer one."

"Saturday," I cried, "But today is only Tuesday."

"I'm sorry, boy, but I got lots of chores to catch up on—with plowin' and plantin' and all."

"The boy is restless, Joel," interrupted Grandma. "He kind of reminds me of you in your younger days."

Grandma's words of praise had hit upon the old man's pride. He gazed at me with anxious eyes.

"Tell you what we'll do, boy," he replied. "After supper we'll go down to the creek and ketch some chubs. That's what to use fer pickerels—and big bait too, maybe five inches long. That way you won't be pested with them skinny ones or perch. You kin take the boat out alone in the mornin'. Jest be careful, and promise me you won't stand up in it. It's a big boat, boy. Think you kin row it?"

"You bet I can," was my reply. I felt as though I could move the world. Gee, I could take the boat out—alone!

That evening, armed with an old net and some pieces of bread, we walked down to the creek in the back pasture. The sluggish stream flowed into the pond. In a few minutes we caught twenty big minnows.

"That'll be enough fer you, boy," Grandpa said. "The main thing is to git your bait down to the fish. Judge the depth of the water by the length of line the anchor takes to hit bottom. Set yer cork so's the bait will be about eighteen inches from the bottom. That'll keep it out of the weeds. We'll put bigger hooks on yer line and add a sinker to keep the chub down under the surface."

I listened intently to these words of wisdom. This was the voice of experience. I would follow the old man's instructions to the letter.

continued on next page

"... we'll catch some chubs . . . big bait, that's what to use for pickerels."



Home is the fisherman

continued from preceding page

"And boy," he cautioned, "Don't be so eager to set your hook. When the fish starts to swim off with yer bait, wait him out. He'll stop and turn it in his mouth, then swallow it head first. When he takes yer cork 'way under the second time, hit him and hit him hard. These are big bait, he'll need time to swallow it. Now git yerself to bed. You should be on the pond at daybreak."

Needless to say, I didn't sleep very well that night. Who could possibly sleep? My mind was full of visions of big fat pickerel fighting desperately at the end of my line, only to be subdued time and again by such a skillful fisherman as I was certain I would be. I suppose such dreams are common to twelve year olds.

I was up long before daybreak and helped Grandpa with the morning milking. After waiting what seemed like an eternity the hour of dawn arrived. Burdened down with my pole, the scrub bucket full of minnows and one of Grandma's special lunches, I made my way over the hill to the pond. Hopefully, that special fish would be waiting to match wits with such an eager boy.

With all the caution of a fox raiding the hen house, I slipped the boat into the cove and gently lowered the anchor over the side. I marked the depth as Grandpa had told me—about six feet, set the bobber accordingly and baited up, ready for the moment of truth.

An hour and a half later I was still waiting. I grew restless. I waited, yet nothing happened. I moved to the cove at the far end of the lake. I let out my line, and waited once more.

"What does it take for these pickerel to bite," I wondered. "Nearly two hours of fishing and not even a nibble."

There was no sense in starving for the cause so I bit into one of my peanut butter and jelly sandwiches. Suddenly, my bobber began to act funny. Then it moved off to my left. Anxiously I jerked back on the pole. Nothing. "These are big bait. Wait till he takes yer cork under." Grandpa's instructions echoed through my mind.

"I've got to give him more time," I thought.

I put on another minnow and cast to the same spot. Resting the pole across the boat, I picked up the sandwich again. The bobber twitched, moved off to the left once again and went under. I threw the sandwich skyward and heaved on the bamboo stick. Nothing, I had missed him again.

Once more, I laid out my line. This time I held the pole in my hands. I waited patiently, yet poised and ready to strike. A few minutes later the cork moved slightly to my right, away from the boat. "Give him time." I said aloud. The cork bobbed, stopped, then started moving again. *I must wait!* With an audible plop it vanished from sight. "Now," I screamed! The long stiff pole bent sharply as I tugged against the heavy fish. The jerk was so forceful that the big scow rocked back and forth—but I had him hooked. I was fast into the fish of my dreams!

The big pickerel fought feverishly near the bottom. Then, with a burst of speed, he was splashing around on top of the water. My heart skipped a beat and I thought for sure I would lose him.

In a few minutes the battle was over. The fish, monstrous in my young eyes, lay belly up on the surface. With a quick swinging motion I hauled my prize into the boat.

My eyes gave the big yellow belly an admiring gaze. Its green and bronze colors gleamed in the early morning sunshine. The black eyes stared at me in contempt and the rows of sharp teeth waited for me to make one slip in removing the hook.

He measured 24 inches and weighed about 4½ pounds. To an excited twelve year old, it was the finest trophy of all time. Believe me, it was a pair of proud, yet shaky, hands that hung that pickerel from a make-shift stringer!

Quickly I grabbed another squirming minnow from the bait pail and made another cast. I waited once again. It was no use; I was too excited to fish. I could stand the tension no longer. I pulled in my line, rowed to the dock and leaving all my equipment behind, picked up the rope stringer and raced for the barn.

From the top of the hill I yelled to the old man working below. I made such a commotion that Grandma came running from the house. Surely they thought something had happened to me. Something had happened! I waved the fish frantically and ran down the hill. They were already running to greet me. . . .

The old man is gone now. He has passed on to his final reward. Grandma outlived him by only two years. Like the once prosperous farm life so dear to them, they too have disappeared from the changing rural scene. The aged homestead is still part of our growing family but its character is missing in the absence of Grandpa at its helm.

Regaining my senses I called to the wandering spaniel. Together we descended the slope for a closer look at the quaint little pond nestled among the hills. Were the big pickerel still prowling its weedy coves? I didn't know. Someday, I would come home again to discover the answer.

"... leaving all my equipment behind, picked up the rope stringer and raced for the barn. From the top of the hill I yelled . . ."



THE ANGLER'S NOTEBOOK



by Richard F. Williamson

Fishing into the autumn and winter months can be rewarding. One reason is that the water has cooled and fish no longer have to seek deep water to find comfortable temperatures. And don't be discouraged if late-season bass seem moody, striking viciously one day and then apparently disappearing completely the next. This situation is due principally to the change that is taking place in water and air temperatures. The late bass is such a fine battler when it does feed that it pays the angler to keep on trying despite discouraging days.

Late season fishing is usually better in the middle of the day and until about 4 o'clock in the afternoon. These are the warmest hours of the day.

Make a list of the lures that have produced the most fish this season and then be sure you have a supply of them for next year. Some may prove duds another season but chances are they will continue to produce.

Cold hands annoy fishermen and gloves are a nuisance when it comes to handling fishing tackle. An application of clean heavy motor oil, which can easily be washed off, will do much to protect the fingers from raw cold.

In drift-fishing from a boat, the lure or bait should frequently touch bottom. If it does not, it is not being fished deeply enough. Correct drift-fishing occasionally results in a snagged bait or lure but it is the only way to produce fairly consistent results.

Preserve those favorite pickerel and bass plugs of yours by giving them a good coating of automobile wax.

The walleye has a habit of taking plenty of time to make up its mind to strike a lure, often following the lure for some distance and then either turning away or taking it. It's a good idea to impart action to the lure just before lifting it from the water. That extra action will often induce a walleye to strike.

Pickerel are the most free-feeding fish of all, in spite of weather and water conditions that would ruin angling for any other species. But to take pickerel, the artificial lure must have action and the "Live Bait" needs to be really alive and active.

Springs at the bottom of a stream hole always attract fish. In summer, the water is cooler there and in winter, strange as it may seem, the water is warmer by a few degrees.

Larger spinners, especially those used in late season casting or trolling for pickerel and muskies, must be moved much faster than the smaller sizes of the same lures in order to develop effective flash action.

At the end of a day of "hard luck" fishing, if you have been skunked, try placing two minnows on a single hook. If black bass ignore this one, just give up!

FALL Fishin's Fun...

but a Fall in the FALL is FAR FROM FUN!!

We had the good fortune to photograph this lucky . . . (VERY LUCKY) angler in action and couldn't help thinking aloud . . .

Nice cast there fella . . .
you can sit down now . . .

He's got it! Easy now, he
. . . better sit down . . .

Watch the prop, it'll tear
the line . . . sit down, OK?

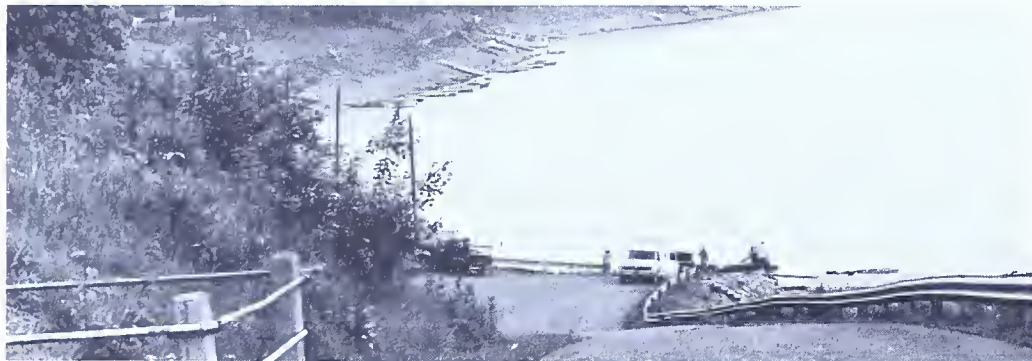
That was close! Better sit
down . . . kneel maybe?

Beautiful! You've got him!
Now, will you sit down???



KEYSTONE CAMPING

by Thad Bukowski



Camping at East Branch Dam

One of the most secluded boating, camping and fishing spots in the state appears to be the East Branch Dam of the Clarion River, a Corps of Engineers flood control and recreation project near Wilcox, Pa., in the northeastern corner of Elk County.

Only four boat trailers were parked at the main boat access at the dam in mid-summer when we visited.

The Corps of Engineers has recently constructed an outstanding 27-site, shaded camping area which is free to the public.

"It's one of the things your taxes have already paid for," reports John Tile, math teacher from nearby Johnsonburg, who works with Temple University student Jim Johnson, during the summers to keep both camping and picnic areas spotless.

The camping site utilizes the sanitary facilities located at the nearby main dam site where the picnic area is an equally picturesque site. A breathtaking view of the 5.7 mile lake is available from this point.

Big boat lovers who use truck campers to pull both camper and boat should love the accommodations. Any camper may utilize the camping facilities by parking both camper and boat at the campsites. Each site has a picnic table, fire-ring, charcoal grille and excellent garbage disposal facilities and water. Your stay is limited to 14 days at one time.

The water skier has a 1,160 acre summer pool practically to himself. The lake includes five bays in addi-

tion to the main body and stretches nearly six miles from the dam to the uppermost end of the longest bay.

Fishermen have much to explore at Clarion Dam, according to assistant superintendent Robert Wright, who reports he catches trout in the vicinity of the control tower, spinning with a bubble. Superintendent Wright, a most hospitable man, suggests vacationers contact him for information prior to camping visits at 814-965-2065 just to assure themselves that spaces are available.

The East Branch has had a history of pollution and for this reason folks may have been shying away from it. Pollution, however, has been abated by the construction of a Yellowboy lime-settling plant on Swamp Creek, chief source of bad water from old mines on the approaches to the southwestern bay of the dam.

"We have been testing water since that time and the usual pH at the dam outflow is now 6.4," reports superintendent Wright. "Last summer's flood, caused by Hurricane Agnes, was the only time when pH dropped to 5.4, and that happened when the Swamp Creek facilities could not take care of excess flood waters. Even at that, this water was only part of the water area of the dam," reports Wright, "And no dead fish were in evidence."

One of the big problems to exploring the East Branch other than by boat is a scarcity of roads to the steep-shored structure. Only one of the big arms has road access in addition to the macadam road at the dam proper. That is at Elk State Park on the northwest wing. Even here Township Road T371 is not sensational for travel and bears investigation prior



ABOVE LEFT—Main launch ramp at Clarion Dam has macadam parking lot and approach. ABOVE—Pickup camper permits towing larger boats which are quite popular on the "Big Waters" of the Clarion River at the East Branch Dam, the main expanse of which is shown BELOW.



to travel with a boat trailer to the launch and picnic facilities at Elk State Park. The macadam road at the main dam entrance where a parking lot and sanitary facilities exist is much more convenient.

Motor horsepower is unlimited at Clarion and water skiing is part of the recreation. As for fishing, the dam was stocked with 400,000 wall-eye and 10,000 muskellunge fingerling since the Yellowboy plant came into existence, according to superintendent Wright. But Wright quickly adds that it is the trout population that provides the fisherman with his present excitement.

"In fact, campers even come during the winter to fish for trout through the ice," he adds. The camp-

continued on next page

Keystone Camping

continued from preceding page

ing area is open then but summer facilities including garbage disposal are not provided during the cold months.

If the camper who visits East Branch in the summer wants a change of pace from his boating and skiing on the lake, he has the West Branch of the Clarion between Wilcox and Johnsonburg available for topnotch stream trout fishing less

than a dozen miles away. A few years ago, biologists of the Pennsylvania Fish Commission electro-shocked the stream and reported "a trout almost behind every rock." Four miles north of Johnsonburg, beginning just upstream from the Montmorenci Bridge is a Fish-For-Fun, Fly-Fishing, trout area.

The East Branch Dam is reached readily from Johnsonburg over LR 24021 just east of the big papermill in the city or from Wilcox over T363

and LR 24013. If the camper's children want swimming facilities, an excellent concrete pool and picnic facilities will be found at Bendigo State Park on the road to the East Branch campsite, a few miles south of the dam. Bendigo has no camping facilities. While the kids swim, dad might wet a line right behind the pool where the East Branch Creek (which is the outflow for the East Branch Dam) is also increasing its fish populations due to better waters.



EXPLORER POST 8 RECEIVES— FISH COMMISSION CONSERVATION AWARD

Waterways Patrolman James Ansell presented the award to Eagle Scouts David King, Wayne Uber and John Hurst while Allan Morris, Secretary of the Mercer County Council, P.F.S.C., looks on.

The Conservation Award was presented

to the Scouts for "willingly and ably joining the fight for clean water, the protection of fish, wildlife and the environment in and along our waterways . . ."

Fishing Outlook

continued from page 3

gets, the better the pickerel fishing. From noon until one hour before sunset is prime time on the Lehigh. Best results have been when the barometer is falling and stormy weather lies ahead.

Larry Barner of Allentown is one of the regulars who will fish this area a great deal during the winter months. In January of 1971 he took a 27 inch Pickerel that weighed 5 lbs. 6 ounces. In December of the same year he had a 28¼ inch fish that weighed 6 pounds even. Both were caught on live golden shiners which were netted from the river. Larry likes shiners that are in the 3 to 4 inch class and fishes almost exclusively where the Little Lehigh flows into the river below the Hamilton Street bridge. The bait is impaled on size 4 or 6 hooks just behind the dorsal fin. A small bobber, 1 to 1½ inches in diameter is attached four feet above the bait. A small split shot is added to keep the bait down. Eight or ten pound test line is used with no wire leader. The shiner is cast into the backwaters or eddies and allowed to swim around freely. When a pickerel takes the bait, it almost invariably heads upstream. When it stops to mouth and "turn"

the bait, it is given time to get it into its mouth properly. On the second run the hook is set and the action begins.

Sam and Marty Yarko, fishing brothers from the Northampton side of the river, likewise spend much of their free time during the winter months fishing for pickerel. They use the 3 to 4 inch Rebel or Rapala, in silver with the dark top, almost exclusively. Marty took a pickerel below the Treichlers Dam last year that went 28 inches and weighed over 6 pounds. They also fish the pools below the other dams on this stretch. The lure is cast out into the current and allowed to drift slowly as it is retrieved very slowly with periodic twitches. A fast retrieve doesn't work now; the pickerel will often follow the lure right into shore and sometimes strike right at shore on the last twitch. They have had their best luck on cloudy threatening days, from mid-morning to mid-afternoon. An average day will see them catch 7 to 10 pickerel that run from 20 inches up!

The Lehigh River in this stretch has some areas that will be good for boat fishing but most fellows prefer to cast from the shore. Hip boots are good enough as the river is shallow over most of its course. Some noted pickerel holes from Palmerton down to Allentown are as follows. Just below Palmerton, and above where the

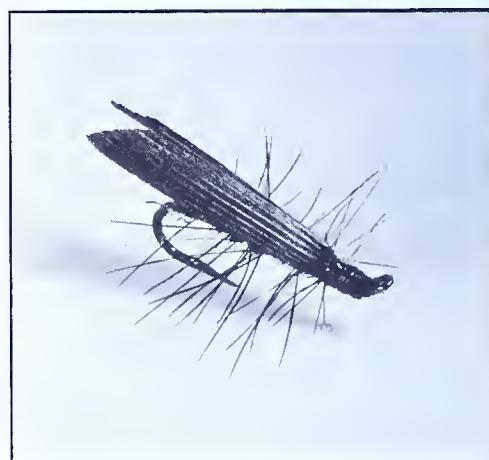
Aquashicola flows in, the river forms a big bend and here many fine pickerel are caught each winter. The huge pool just below the Slatington bridge, adjacent to the paint Mill, is a good spot for shore fishing. The pool below the Treichlers Dam and the next hole down at the turn of the river have also produced nice fish. The old broken down dam near the town of Laury's Station has a fair sized pool and a few fellows give this area a workout during the winter months. At the foot of the Cementon Dam and at the Hokendaqua dam are also local favorites. Just below the Hamilton Street Dam in Allentown and down below where the little Lehigh enters completes the listing of the choice sites. Below this spot water quality again deteriorates and there is very little fishing pressure down to Easton.

Undoubtedly there are many other good pools in this stretch that harbor fine Pickerel populations but it means walking into them. An occasional Smallmouth Bass and a few Largemouth are also caught here. Some nice Perch and hold-over stocked trout, which must be returned to the water, are also caught. The walleye which were stocked should be in the 10 to 12 inch class by now and it'll be interesting to see how many of these will be caught this winter from these waters.

FLY TYING

by chauncy k. lively

photos by the author



Coinciding with the burst of wildflowers in Spring is the appearance of small, dark caddisflies over our trout streams. A scant quarter-inch in length and sooty-black in color, these little *Trichopterans* seem to thrive on sunlight, for like the blossoming flora, they are at their best on bright days. Their emergence generally begins in the latter part of April and extends to late May or early June, with a few stragglers appearing until mid-July.

The Early Black Caddis most common in Pennsylvania is known by entomologists as *Chimarra aterrima*. The larvae are fast water inhabitants which do not build cases but instead spin cylindrical nets of fine mesh, woven from the most delicate silken threads. The nets resemble the fingers of a glove and several are often found together on the undersides of rocks. The upstream end of the net is open, by means of which particles of food are trapped. On the opposite end is a small opening, through which the larva can escape if danger threatens. During the pupal stage the insect resides in a case of stones.

Although the Early Black Caddis

is traditionally represented by a wet fly, I have found it advantageous to imitate it with a floater because of its frequent appearance during the prime dry fly time of late May. The pattern is an adaptation of our Cinnamon Sedge, which was described in the January, 1969 ANGLER, with some changes in basic tying procedure to facilitate construction and to improve durability. Front-to-rear hackling is employed in the present pattern, mainly because winding the hackle rearward over the tapered body points the barbules slightly forward in front and backward in the rear, all of which promotes better balance on the water and more closely resembles the posture of the insect's legs. Winding the tying thread back through the wound hackle to the head of the fly may be accomplished without depressing the barbules and thus bound, the palmered hackles are fixed to the fly in the most enduring way.

The method of winging has also been modified. As before, the quill section is coated with vinyl cement for durability but now the thin tip of the wing is left untreated. Then, after folding the wing to achieve the

roof-like shape, it is bound to the hook by holding the tip with the right hand and making the initial turns of thread with the left. The thread binding should only be over the uncoated tip of the quill. This procedure simplifies the winging and prevents disturbing the hackles, as would be the case if the left hand held the wing in position. The diagonal trimming of the folded wing achieves the characteristic notch at the rear of the caddis wings, visible when viewed from the underside.

Entomologists generally use the term "sedges" and "caddisflies" interchangeably in reference to the insects of the Order *Trichoptera*. But interestingly, David Jacques, the eminent British angler-entomologist, makes a distinction between the two, contending that although all *Trichoptera* are sedges, technically, only the case-builders are caddisflies. Whether *C. aterrima* should properly be called the Early Black Sedge is a matter of purely academic interest to anglers, and I'm sure, of no consequence to the trout. They simply take them as they come; caddis or sedge, fish treat them as a gourmet's delight.



◀ 1. Clamp a size #18, fine wire hook in the vise and bind tying thread to shank behind eye, allowing ample space to attach wing. Then select one each black and chocolate brown hackles of dry fly quality, with barbules about twice as long as gap of hook. Remove webby portion and bind to shank in a vertical position with glossy sides facing bend and edges facing tier. Bend hackle roots forward and bind with several turns, as shown. Trim off excess roots.

2. For wing, cut a section of black-dyed duck wing quill about 3/16" wide and stroke the fibres until it is straight. Grasp the thin end of quill with hackle pliers and coat the rest of the quill on its shiny side with vinyl cement. Put aside to dry.



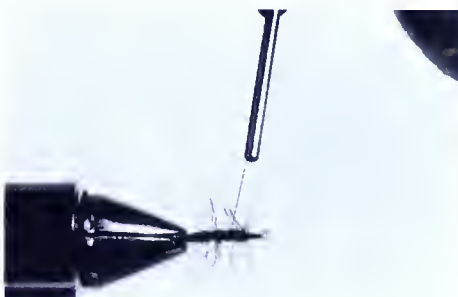
◀ 3. Wax a short length of the tying thread next to the hook and apply a thin dubbing of black kapok or spun fur. Then wind the dubbed thread rearward, forming a tapered body, to the bend and half-hitch.

4. Wind the hackles separately, taking a full turn in front, then spiralling back to bend in open palmer fashion and tying off each at rear of body. Half-hitch.



◀ 5. With fine-pointed scissors trim off the hackle both above and below the body, leaving only those barbules extending from the sides.

6. (Top view) Carefully wind the tying thread forward in spaced turns through the wound hackle and half-hitch at fore end of body.



◀ 7. Remove the quill wing prepared in Fig. 2 from the hackle pliers and fold it along its length, with the dull side of the quill inside. Then grasp the thin tip of the quill (the untreated part) with the right hand and hold it in position while binding it to hook with the left hand. Trim away waste, build neat head with thread, whip-finish and cut off excess thread.

8. Holding scissors at an angle, trim wing to size by making a diagonal cut, as shown. Approximately 1/4 the length of wing should extend behind bend of hook.



9. After applying cement to the head and to the hackle tie-off in rear, the Early Black Caddis is completed (preceding page.)



NEW HOME?

During the June flood in Wilkes-Barre a large number of carp were observed checking out the area. They must have wanted to see how the people live on the other side of the tracks. It was reported that some of them were spawning in this new area.

Joseph E. Bartley
WWP (Pike/Wayne Cos.)

DUCK SOUP ANYONE?

Brett Morgan, 8 years old, from Wilcox, Pa., went fishing at Twin Lakes. He made a cast and set his rod down on a fork stick. The line started to go out and he said to his father, "Dad, I've got a bite." He set the hook and reeled in a duck which had wrapped its leg around the mono line and the hook was imbedded in the duck's foot. After some time the duck was released unharmed.

Bernard D. Ambrose
WWP (Elk Co.)

NO CHANGE PLEASE!

While at the Scranton Water and Wheels show the deputies were selling packets of material which contained most of the Fish Commission's publications, including the fifty cent colored fish booklet. The booklets were in a Fish Commission litter bag. Business was extremely good, when one gentleman came up to Officer Rebar, and was then given the sales pitch. The man took a bag, and gave Officer Rebar a dollar, I reached in the cash box for fifty cents change, when the gentleman spoke up and said, "No change please, the Fish Commission deserves much more support for the job they are doing." Officer Rebar gave him another bag, just to keep things even.

Robert E. Fasching
WWP (Lackawanna Co.)

HIGH-BUT NOT DRY!

The first day of bass season saw the Juniata River high and muddy and fishing was not what it should have been. I, however, had a word of encouragement for the many fishermen I contacted, informing them that the river should be in good shape *the following weekend*, June 24-25! On those dates several large carp were observed—not in the Juniata River—but in my back yard, where the water reached a depth of 10'-12' during one of the worst floods this area has ever known!

Richard Owens
WWP (Mifflin/Juniata Cos.)

STRANGE BUT TRUE

The following was passed to me by Charlie Brunner:

"While spinning at the south wall of the spillway at Marquette Lake Friday afternoon, fish weren't biting so I decided to check the depth of the water with my rod.

"I reeled in my lure all but an inch from the end of my rod, put my rod straight down to the bottom of the lake and caught a 12 inch brook trout. I was alone but it's true."

Paul Hornberger
WWP (Lebanon Co.)

SECRET'S OUT!

The flood in June didn't dampen fishermen's interest in Cameron County to the point of no fishermen at all being sighted for several days on the streams in the area. Every year an avid angler from Maryland who has a camp in the rich valley area spends a week fishing the upper Driftwood Branch. He was telling me the other day of the tremendous amount of beautiful trout that are in the stream in the area of his camp. He also told me not to "noise it around" as he had the stream all to himself and he was really getting his vacation's worth. Many, many trout were released by him. I suppose it's safe to tell it now!

Stanley G. Hastings
WWP (Cameron Co.)

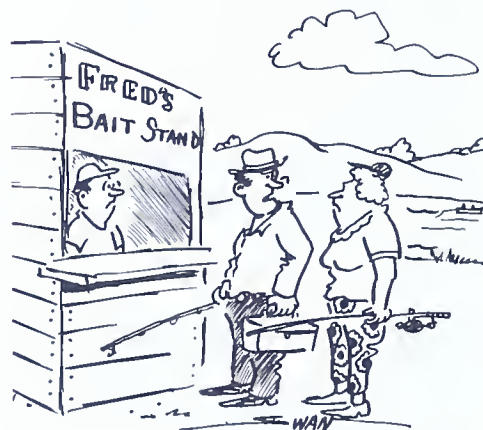
OVER MY LIMIT!

Upon one of my deputies receiving his commission as a Deputy Waterways Patrolman this story was related to me by another member of his family, which is quite amusing. The story went like this: Father to Deputy, "Well, Butch, now that you are a Deputy, I guess I won't have to worry about catching *over my limit* of trout this year." Deputy to father—"Well, Pap, I don't know what difference it will make, because you could never catch your limit before, so I guess I shouldn't have to worry now."

John Stepanski
WWP (Dauphin Co.)

OUTDOOR EDUCATION

On the opening day of the 1972 Bass Season, the 3rd Annual Canoe Float Trip was held on the Clarion River. Over 65 canoes floated from Cooks Forest to the Fish Commission Access Area at Mill Creek, a distance of about twelve miles. Many of the canoeists had their rods with them, and had some nice catches of small-mouth bass on their arrival at Mill Creek. At the completion of the float trip, at the Mill Creek Access, there was a good crowd gathered to watch the canoeists arriving as well as to witness the "Outdoor Boating Safety Demonstration and Fly Fishing Demonstration" that was put on by my Specials and I. We gave a talk on



I WASN'T CURSING! I JUST ASKED HOW THE HELLGRAMITE WAS WORKING.

Boating Safety, equipment and practices, then proceeded to demonstrate what we had talked about, such as docking and undocking, plaining, wake, and handling. SWP Kodrich gave an impressive demonstration of Fly Casting, much to the amazement of some of his students at Clarion State College. The general comments from the gathering were quite favorable and it would appear that some bit of wisdom and safety practices were left with all who were there. My thanks to Specials Cooper, Chamberlain and Kodrich who did a fine job under some rough conditions.

Robert J. Cortez
WWP (Clarion Co.)

VALUABLE LESSON
TO BOATERS

In the recent flooding of the Western Rivers, Officer Crayton, SWP Milford and I were involved in rescuing boats, when a dock broke away from its moorings, and was floating down the Monongahela River to destruction at the Braddock Dam. Suddenly a rope was caught in our prop, causing our motor to fail. This placed us in a very dangerous position, with debris etc. in the river. Needless to say the most valuable piece of equipment on our patrol boat that day was my pocket knife.

James R. Smith
WWP (S/Allegheny Co.)

EXCUSES

During the first weekend I patrol the Rivers here in Allegheny County, in May, I hear a number of excuses for not having their boats registered for the current year, and this year was no exception. I heard the following this year: "We are getting it documented to save the sales tax," "It was such a pretty day I decided to take a chance," and "I just forgot to send for it." Each one of the above said, "Am I getting a ticket?" as I filled out the boarding forms and I said "Yes Sir!"

Gerald T. Crayton
WWP (N./Allegheny Co.)

AND ONE MORE
MAKES THREE

Special Waterways Patrolman, Rich Hendricks, and I were patrolling Raccoon State Park Lake during the closed season when we spotted this fisherman on the other side of the lake. I said to Rich, "That guy has a lot of nerve sitting there in the open fishing." Rich offered, "I can't tell if he's fishing or not, but he has waders on." The next few questions we exchanged were, "I wonder if he has any trout and I wonder if he has a license?" At any rate I said, "He is in serious trouble!" A frantic search for the binoculars was all in vain. Nothing left to do but go right over there and collar this violator. Can you picture the expressions on our faces and the convulsive laughter which swept over us when we approached on tiptoe, very quietly conducting our investigation and discovered the bold and brazen fisherman was a home-made Halloween dummy?

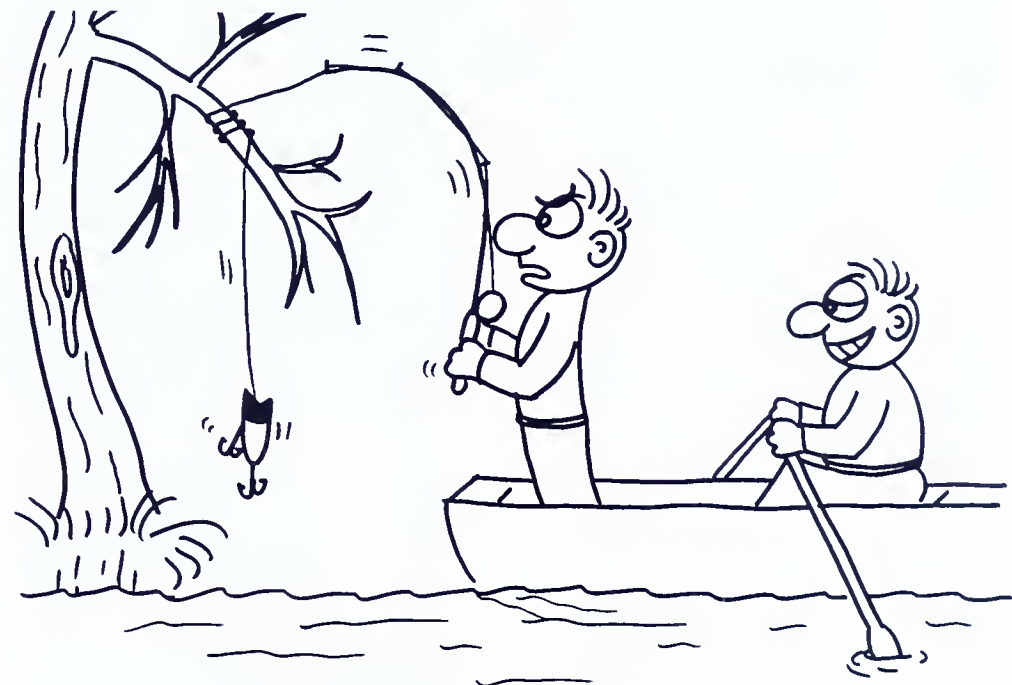
Danald Parrish
WWP (Beaver Co.)

HAPPY ENDING

A "true" fish story as told me by the local Priest:

He said a friend of his has a cottage along the shores of Pymatuning Lake and his little boy had been fishing and laid his fishing pole down on the dock. Suddenly there was a bite on the line and then before the boy could grab the pole the fish had taken it into the Lake. Later the same day the father was fishing from the same dock when suddenly he thought he had a hit. When he retrieved his line he found that it had become entangled in another fishing line. When he reeled the other line in, he found it to be his son's fishing pole with a Carp still attached to the other end.

Warren L. Beaver
WWP (W./Crawford Co.)



NO, I WASN'T TRYING TO GET THAT SQUIRREL!

WALLEYE CATCHES!

The interest in fishing at the Koon and Gordon Lakes for the month of November is always high as shown by the number of fishermen and their catches. The walleye catch at Gordon Lake is always high. Fishermen have studied the habits of Walleye and knowing the habits of this fish has helped the fishermen to enjoy their fishing. Most of the fishermen at this lake will not kill a walleye unless it is over eighteen inches. Quite often I have noticed a fisherman catch a walleye that is legal and he will release the fish because he knows that a lot of fishermen think the fish should be around eighteen or twenty inches long. On a number of occasions

over twenty to thirty fishermen can be counted at one location fishing for walleye and all from other states, mostly from Maryland and West Virginia

William E. McInay
WWP (Bedford and Fulton Cos.)

CO-OPS STRIKE BACK

I have seen a number of floods in Potter County, but never like the June flood. All streams in the county took a beating from this flood. Three of my Co-op Nursery projects took a big loss in fish and construction. However, I have contacted sportsmen and they are all willing to pitch in and make repairs to continue the Co-op Nursery project.

Kenneth Aley
WWP (Potter Co.)

DEDICATION—IN SPADES!

Howard Sherlock, an old veteran of the Deputy Force, the day after being released from the hospital from a recent illness, stocked three lakes and picked up a fish law violation. How's that for dedication?

Arthur A. Herman
WWP (Westmoreland Co.)

DINING IN STYLE!

At the Browndale Sportsmen Awards banquet I supplied trout place mats. I noticed several ladies neatly fold them up and put them in a place of safe keeping. One lady said they were too nice to eat from!

Harland F. Reynolds
WWP (Wayne Co.)

BOATING

Questions & Answers

by Capt. Jack Ross

From W. F., Irwin:

"I recently bought a Martin 60 outboard motor, and wonder if you could tell me the horsepower, who built it, and whether parts are available in this area?"

—The Martin 60 was built during the early 50's by the National Pressure Cooker Co., Eau Claire, Wisc., and was one of the first small engines to use poppets rather than reed valves. The operation was discontinued in 1955, because of the lack of a dealer organization. This model is rated at 7.5 horsepower, and Ted Miller of Mercury Outboard Sales, Export, Pa., telephone (412) 327-4923, still has a good stock of parts.

From J. P., Ashley:

"Can you tell me where I could get a waterpump impeller for a Firestone 7.5 horsepower motor; I have written to Firestone, but they can't help me?"

—Most of the Firestone outboards were built by Scott-Atwater, and a few by West Bend. Write to Dobosh Service Center, 5167 Brownsville Rd., Pittsburgh, Pa. 15236, and be sure to give the serial number of the engine. Ray Dobosh tells me he still has a fair stock of parts for Scott and West Bend outboards of this period.

From G. F. E., Lewisburg:

"My inboard engine is more than 20 years old, and is hard to start, although it runs fine once it gets going. What can I do to make it start easier without spending a lot of money?"

—The hard starting is caused, of course by a lack of compression and general "tiredness" of the engine. Your six-volt ignition system puts out less spark as you crank the starter over for a while, since the battery voltage drops off rather quickly. A cheap and effective solution that usually works is to install an eight-volt battery, available from any large auto parts distributor. This will give

you faster cranking and a hotter spark, and should make the engine fire off much easier. You will have to have your voltage regulator adjusted, or else your generator will not charge the larger battery.

From L. M., Erie:

"The engine in my boat apparently has a bad rod bearing, and knocks very heavily. Is there any way I could run the boat about ten miles to a repair yard?"

—Take the spark plug out of the cylinder with the bad rod. The engine will run a bit rough, but there will be no load on the bearing so it will not be damaged further. To avoid pumping gasoline fumes into the bilge from the open cylinder, insert a piece of hose in the spark plug hole and lead the other end over the side.

From W. J. T., Zelienople:

"Would it be possible to make a trip by water from Pittsburgh to Erie, and about how far would it be?"

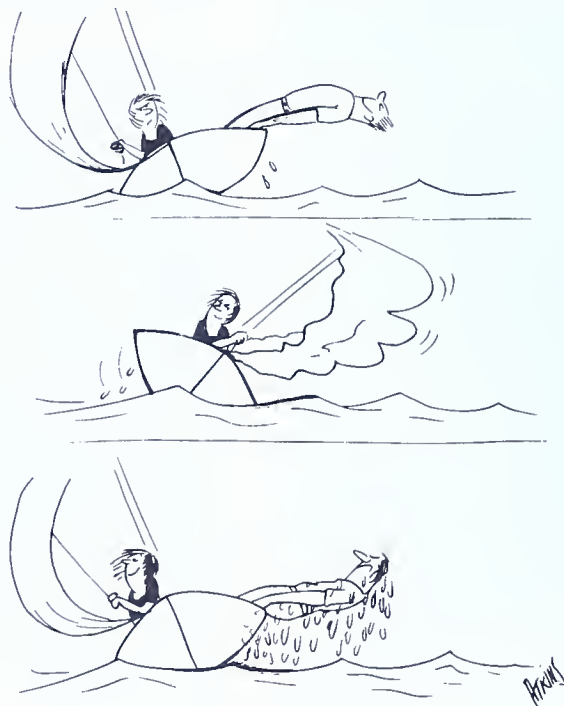
—The shortest water route from Pittsburgh to Erie would be via the

Ohio River to Cairo, Ill.; up the Mississippi to Grafton, Ill.; up the Illinois River and through the Chicago canals to Lake Michigan; through Lake Michigan, Lake Huron, the St. Clair River, Lake St. Clair, Detroit River, reaching Lake Erie at Toledo. The final leg of the trip would be eastward along the Ohio shore of Lake Erie. Total distance by water is approximately 2,350 miles, and could be run comfortably in a month. If you make the trip, be sure to write the Angler and tell us about it.

From C. S., Wormleysburg:

"The threads are stripped out of the spark plug hole in my outboard motor; can the head be rebored for a larger plug, or must I buy a new head?"

—Fortunately, there is an answer simpler than either of those. Any well-equipped outboard motor repair shop should have a tool for installing a 'helicoil,' which is a sort of bushing that provides new threads of the same size. Boring to a larger diameter is not advisable, since it may not be possible to find a suitable plug in the larger thread size.



CO-OP NEWS

by Bill Porter

A monthly feature devoted exclusively
to Pennsylvania's Cooperative Nurseries—

*Cooperative Nurseries are fish rearing facilities
built and maintained by organized sportsmen
... at their own expense.
Fingerling fish provided by the Pennsylvania Fish
Commission are reared and released in public
waters of the sportsmen's choice
in accordance with policies prescribed by the
Fisheries Division's Cooperative Nursery Branch,
Robert H. Brown, Chief.*

Normally barns are for raising cattle, milking cows and similar chores. There is, however, a barn in Erie County that is used to raise trout. Obviously, the contrast makes the story and here it is:

As a cooperative venture between the 3-C-U Trout Association and the North East Hunting & Fishing Club, a cattlebarn was converted into a fry and fingerling holding station as a joint project. The Cass Barn conversion, begun initially in 1970, showed excellent results for the extensive work done. Since that beginning stage, additional improvements have been made to The Barn and more are contemplated for the future.

The uniqueness of the site, an use of interest, adds one more chapter to "Yankee Ingenuity" in the growing history of the Cooperative Nursery Program. However, there are more important issues than The Barn simply being different. The facility turned out to be ideal for temperature and light control, and maximum use of a limited water supply to say nothing of the elimination of the predator problems.

Obvious proof of the above glittering generalities would be found in the construction of the building itself.

The portion of The Barn used for the nursery is formed from heavy stone walls; most are below ground level and basic temperatures remain fairly constant as a result. Water remains within a degree of variance nearly year round and the air temperature is fairly steady with a certain coolness in warm weather and some protection from the severe winter temperatures. Freezing of surface water is not a problem. In a routine report to Bob Brown's office, North East people reported a typical April reading: "Water temperature at the intake—51° and 52° leaving the last trough just prior to flowing through the outlet in the floor." The single door opening to the outside is heavy, away from the wind, and reasonably tight, assisting with inside air temperature control.

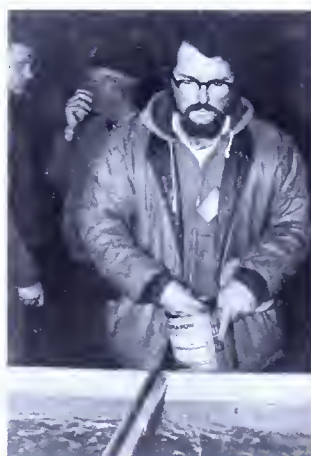
Natural light comes through a couple of small windows which may not be enough for certain stages of growth of the young trout. On the other hand, since The Barn is wired, the sportsmen have found that the use of artificial light actually gives them better control of the fish and has increased feeding capacities and added to the growth of the fry and fingerlings in a shorter period of time.

In appearance, The Barn's troughs are formed of wood that follow the shape of the barn walls, making right angle turns at the proper spots. Each layer or portion of the continuous trough is lower than the section preceding it. This maintains a good rate of exchange and aeration. Again a typical report from the nursery proves the effectiveness of the construction: "Oxygen was 8.5 at the intake and 7 leaving the last trough." The report goes on to state that the troughs at that particular time held over 30,000 fingerlings.

A description of the troughs is best read from the notes of Gust Wyrich, nursery manager for the North East group. Gust says: "The dimensions of The Barn are 30' by 40'. Presently (June 18, 1972) there are six troughs, 30" wide and 16' long. The bottoms are 3/4" plywood, glued and nailed to 1 x 12 pine boards. Each trough is also banded with strips at five locations. The last trough sits on the floor while the other troughs are raised proportionately by 2 x 4's and cement blocks until the first trough is 28" from the floor." At the time of our visit the men were discussing addi-

continued on page 32

Lower left—Jerry Honard, Bob Hetz, Don Howard and "Zeigie" Kendra observe coho fry in the Cass cattle barn nursery, affectionately (and appropriately) dubbed "The Barn." Center photo—Bob Hetz, 3-C-U prime mover, feeds young coho. Lower right—Bob Brown, Cooperative Nursery Branch Chief checks water temperature in "Barn's" troughs; WWP Jim Carter and Deputy look on.



Untapped Riches

continued from page 7

a muskie. After forty minutes of skillful tackle handling and boat maneuvering, the muskie came to the top, exhausted. Fortunately, Selly's gaff is a permanent fixture in the boat. Look at the fish . . . look at the jig. This may very well be the largest fish ever taken in Pennsylvania on ultra-light equipment and a tiny, artificial lure.

The mechanics of this operation involves any type of heavy duty equipment which will cast a lure. Because the hand has close contact with the wet line in the cases of the multiplying reel and the open face spinning reel, the push-button, closed face spinning reel is more comfortable to use in cold weather. The kind of rod manipulation which is necessary and the size of fish frequently encountered dictate the need for a tough rod with substantial backbone. There was a time when there were no rods on the market, ideally suited for jigging, and very few good muskie rods which would lend themselves to this purpose. As a result of "Tid" Sheldon's promotion and work with the research and development people of the Heddon Company, we now have the famous "Brute Stick." Twelve to fifteen pound test monofilament line will do the job. A half ounce, lead head, built on a #2-0 jig hook, dressed with white or yellow (you should experiment with color) bucktail provides the terminal poison. When the jig is cast, it should be permitted to settle to the bottom (wait for slack line on the water). With the rod tip held low, recover the slack line on the reel, then strike sharply upward. Drop the rod tip again, recover slack line and strike upward. Repeat this rhythmic operation until the jig has been recovered. Thus, the complete recovery path of the jig is a series of half loops, with the low points being on the stream bottom.

My experience has been that I can fish comfortably and effectively in air temperatures down to about 30 degrees Fahrenheit. Between 30 degrees and 25 degrees, you can get by if you are willing to break the ice out of the guides every six or eight casts. Below 25 degrees, you are better off sitting at home.

Variations of the basic jigging approach sometimes produce surprising and gratifying results. In early winter, bass are known to stack up in

"The Little Shaving Brush."



deep holes in rivers. Attach two small jigs to your line (one to the end, one on a dropper), cast them into a stack-up spot, let the jigs settle to the bottom, then retrieve them very slowly, sometimes bottom walking them, sometimes swimming them. Brace yourself for a double of fine bass.

It should be noted, also, that cold weather jigging is effective in lakes and impoundments, providing that there is sufficient open water to permit operating from a boat.

The subject of jigging in some limited quarters is mildly controversial. There are those who regard this type of fishing disdainfully, holding that it is a foul means of snagging fish illegally. I believe, as do many more experienced, observant and analytical fishermen than I, that the jig is, in every sense, a lure. This darting object with hair in breathing-like motion is obviously attractive to game fish, as evidenced by their taking it deeply within their mouths. In considering the so-called rough fish or bottom feeders, jiggers generally agree that they are particularly concentrated in eddies along the shore lines by floating ice, high, fast, frequently debris filled channel waters. In these eddies where it is unnecessary for them to fight the push of the current, there is feeding activity and competition for the food which is washed into the eddies. Under these circumstances, as a jig sinks to and lays momentarily on bottom it excites and attracts the competing bottom feeders. They apparently nose it or take it into their mouths and are hooked when the jig is hopped. The large number of fish hooked within and around the mouths seems to support the conclusion that concentrated fish are hungry fish. It is quite true that fish are sometimes hooked in the fins, the tail or the skin of the back. I do not believe that the jigger has deliberately snagged an unsuspecting fish, but rather has accidentally hooked

a fish which has been attracted to the lure by his excited urge to feed in a highly competitive situation. Further, those fish I have foul hooked have not been injured or damaged and since I seldom kill fish under any conditions it has not been difficult to return them to the water. The basic objectives of connecting with and playing a fish have been served and the fun has been had.

The so-called rough fish, and we have them by countless tons in the great river systems of Pennsylvania, create very realistic problems for fisheries research and management people, whose talents and energies are pointed toward providing quality game fishing for all of Pennsylvania's anglers. A management tool which could serve the objectives of this program and provide sport for thousands of anglers as well, would be the encouraged harvesting of great numbers of the bottom feeders.

There can be a pleasant, tangible reward for the fisherman, also. Those who have not tried properly smoked carp or deep-fried fish cakes, made of red horse sucker which has been skinned and put through a food grinder (the aperture plate in the grinder catches the bones) have missed something which would make the most fastidious epicurean raise an eyebrow with pleasure.

Although this little narrative is oriented on northwestern Pennsylvania, jigging has developed an enthusiastic group of followers in the lower Susquehanna region, some of whom have established enviable records.

It seems to me that in Pennsylvania there is a great sports opportunity and a proven technique which anglers generally are not capitalizing upon. If you are a fisherman who gets restless throughout the long winter months, search out an eddie in your favorite river and do some bottom hopping with the little lure which looks like a shaving brush.

A FISHING FEATURE FOR FISHERMEN FROM FISHERMEN

FISH TALES

by Doris Katsonis



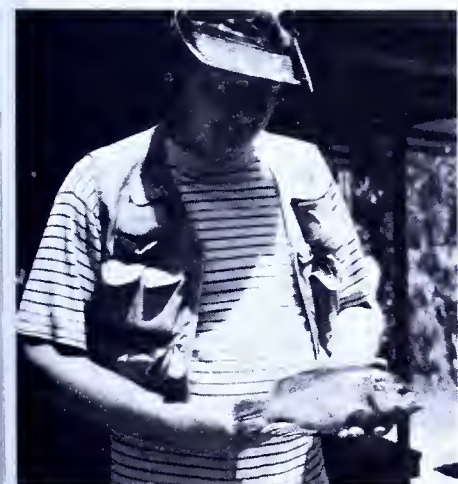
FRANK TARCHAK, JR., Age 15, proudly holds the 24¼ inch—8½ pound, large-mouth bass he took from Mud Pond while ice fishing with a tip-up and a minnow. Frank lives in Carbondale.



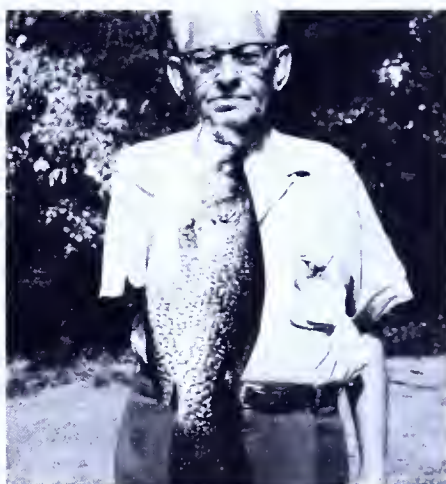
A musky fisherman (above) RONALD BONDI, of West Mifflin, holds the 47 inch, 36 pound, musky he landed from Pymatuning Lake last April using spinning gear and a jig.



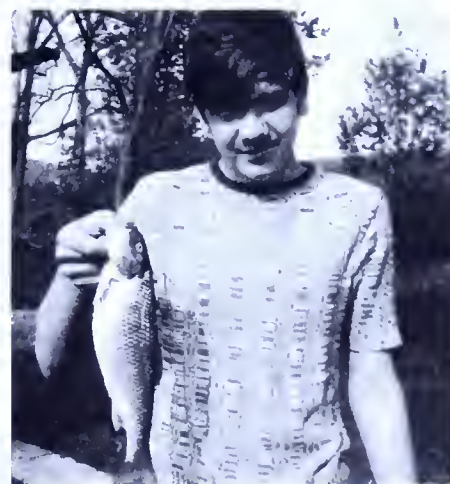
DAVID W. TRACY, age 7, of Brodbeck's is getting an early start as a fisherman. He caught his 29¾ inch northern pike from Lake Marburg using spinning gear and a minnow.



A Perryopolis resident, JOHN MARTINAK, caught his nice rock bass, 11½ inches—1¼ pounds, from the Youghiogheny River using spinning gear and a Joe Fly Spinner.



JOHN WALCK of East Stroudsburg caught his big crappie from Saylor's Lake using spinning gear and a minnow. It measured 16¾ inches and weighed 2½ pounds.



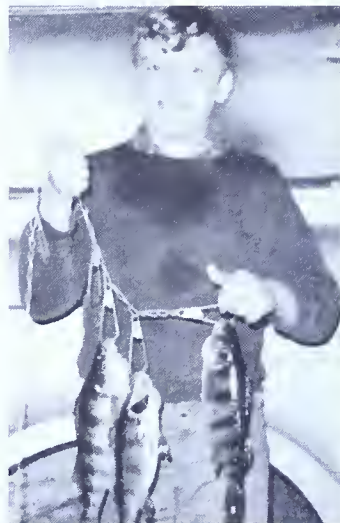
This Shermansdale youth, TOM WILSON, caught the 14½ inch—1½ pound, fallfish from Perry county's Shermans Creek with spin casting gear and a nightcrawler.



DONALD DELAMETER, Towanda, holds the 42½ inch—25 pound musky he landed from the North Branch Susquehanna River while another dedicated musky fisherman, AL ROMAN (right) of Ambridge, gets help from WWP DON PAR-RISH in holding his huge 47¼ inch—40 pound musky caught from the Pymatuning last May. (Photo courtesy Rudy Schunk, Beaver County Times).



The beautiful rainbow trout (left) is held by angler MICHAEL ZEMLANSKY of Whitehall. It was taken from Jordan Creek with spinning rod and corn and measured 27½ inches. BILLY and KEVIN MARCH were fishing with dad when they caught the 29-inch northern pike from Lake Marburg. It hit a chub last May. The March's live in Dillsburg.



CLAY BORGER, 12, of Saylorsburg holds his stringer of citation yellow perch he caught from East Bangor Dam with spinning gear and worms. They measured 13½ to 14½ inches. Little PENNY GARLAND of Needmore caught her 33-inch eel at Barnett's Run in Fulton County last April. It weighed 2¾ pounds and took a worm on her spinning gear.



Girls like to fish too as evidenced by this happy lassie, CHERYL WEISS, of Moscow, Pa., holding her 28¼ inch chain pickerel caught from Lake Walenpaupack while ice fishing.



A West Hickory lad, ROGER RAYBUCK, landed his 36-inch, 13½ pound musky from the Allegheny River in Forest County using spinning gear and a jig last December.



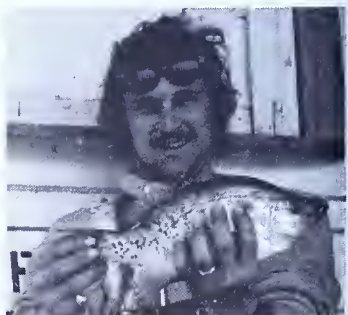
5-year old RAY JOHNSTON, of Boston, Pa., and his dad caught this 45-inch—22½ pound musky at Lake Somerset while trolling with a rapala. They always read the ANGLER together too!



FRANK BROWN of Phila. had a busy day last April when he caught three citation fish from the Delaware fishing with worms. In addition to two bullheads he caught this 25-inch carp. RONALD FLANAGAN (right) holds the 14-inch yellow perch caught at Glendale Lake with a nightcrawler. He lives in Ambridge.



Eleven year old CHARLES OSWALD, of Oakmont, holds the 14½ inch bullhead he caught while casting with a nightcrawler along the Allegheny last April and RON NADZEAN (right), of Warren, Ohio, displays the 15½ inch crappie he took from the Pymatuning near Harris Island. It weighed 1½ pounds and took a doll fly.





CITATION SIZE FISH
LOUIS D'AMBROSI of Swissvale holds one of his musky catches—a 40¾ inch, 16¼ pounder taken from the Allegheny, while BURTON HATHAWAY of Girard (right) holds his 27-inch rainbow taken from Elk Creek and (far right) an avid York fisherman, MICHAEL DAVIS, holds his 23-inch, 8½ pound largemouth taken from Pinchot Lake.



ROBERT KAMINSKE, 8, of Seneca was fishing for bass with his father and grandfather along the Allegheny near Oil City when he landed this 30¼-inch musky. Another avid fisherman, DAVID BONSER of Saylorsburg (right), holds the 15½-inch yellow perch caught from East Bangor Dam with spinning gear and a rebel.



A York resident, STANLEY BRACHT, 15, holds the 42½-inch, 18½ pound musky he caught from the Susquehanna in York County. It hit a bucktail. Now a member of the *weaker* sex, PAULINE MYERS of Clark Mills, holds the 46-inch, 32 pound musky she caught from the Pymatuning while spin-casting with a nightcrawler.



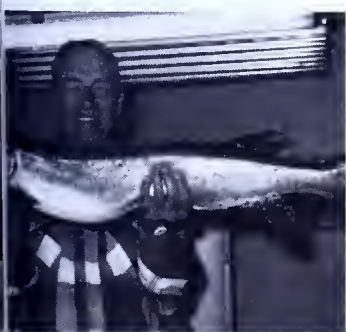
This nice walleye was taken from Shawnee Lake last March by JOHN BEHON of Jenners, using spinning gear and a nightcrawler. It was 31 inches and 11 pounds.



Another musky fisherman, MEL SHEFFEY of Pottstown, holds one of several catches. This one measured 44-inches and weighed over 22 pounds. It was taken from Perkiomen Creek last January.



FRANK HARTLEY, of Philadelphia, holds his prize catch of a 42-inch, 17 pound musky taken from the Susquehanna in York County last January.



The Allegheny River in Venango County yielded this 41-inch, 16½ pound musky to LOUIS VERESH of Pittsburgh. It hit an artificial lure last October.

FOR OUR NEW SUBSCRIBERS

We receive many more photos than we can possibly publish and have limited the FISH TALES section to pictures of CITATION SIZE FISH ONLY.

Citation applications are available at sporting goods stores or from your local Waterways Patrolman.

IMPORTANT:

Citations are awarded for fish caught in PUBLIC WATERS ONLY! Waters must be open to fishing by the general public without payment of fee. Photos should carry complete information on the back—name and address, species, length, weight, when and where caught and the bait or lure used. Print plainly but do not press with a ballpoint pen—we cannot use photos with writing "showing through" or those which are cracked, blurred or poorly exposed.



CHARLES KOEPLER of Warrendale was fishing the Pymatuning near Harris Island when he landed this 30-inch walleye. It weighed 7½ pounds and took a worm.

WANT TO MAKE SOMEONE HAPPY?



CO-OP NEWS

continued from page 27

tional troughs to utilize the space in the center of the room.

The water supply is a spring about 1,000 yards from the building. Plastic pipe, dug in below the frost line, carries the water to the intake unit. Flow is sometimes minimal, but none of it is wasted. The structural devices plus the temperature control factors offered by the building itself help maintain quality even during low water periods. During our April visit, volume was 21 gpm and Bob Hetz,

3-C-U officer, told us that it has dropped to 15 gpm and occasionally down to 12 gpm during the summer. The facility is somewhat of a model of effectiveness under modest water quantity conditions.

Essentially coho fry and fingerlings are held in The Barn for eventual distribution to other rearing areas in the North East/3-C-U complex. Brook trout have been introduced into the Erie cooperatives program, and The Barn served as hatching and holding station for about 11,000 brook trout fry this spring. 19,000 coho fry were occupying other sections of the trough at the same time.

The Barn supplies an excellent early-stage rearing area for the tiny trout. Ideal conditions exist for temperature, water, feeding, and protective controls. In reverse order, The Barn is not intended to raise adult trout or even fish approaching legal size. It serves, in effect, as a giant mother hen brooding over her eggs and nurturing her young until they are able to fend for themselves. This comes soon enough for the growing trout as they are distributed throughout the numerous nurseries of the 3-C-U North East associations for eventual stocking in the lake and the area streams.

LAKE ERIE

Changing—not dying

continued from page 11

abundance since the 1920's, have attained reasonable, biological stability. The benefits of expanded food chains and habitat niches developed from the enrichment process of eutrophication favored the above fishes in one way or another.

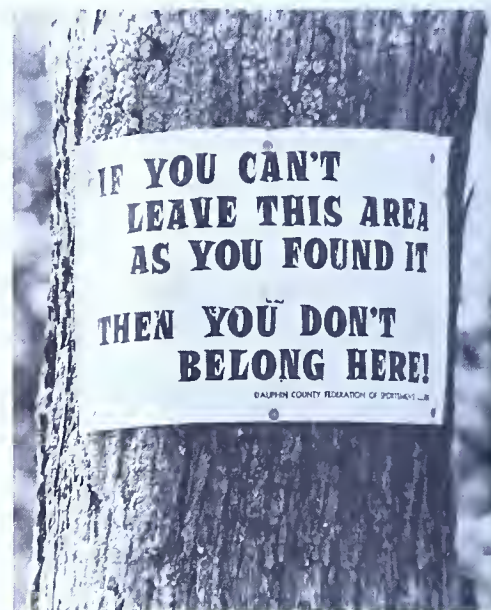
Smelt have become the major inhabitant of the deeper waters of the eastern basin and, in addition to providing for a fruitful commercial fishery have, with the emerald shiner, supported the coho salmon populations throughout Lake Erie. Numerically, smelt comprise 90% or more of the fish populations of the eastern basin yielding an annual harvest to food processors of about 14 million pounds.

The recent success with the coho salmon has encouraged the Fish Commission to think in terms of salmonid management for the eastern basin. The continued relative abundance of rainbow trout and even the occasionally observed brown and brook trout has satisfied us that the Pennsylvania and New York shores of Lake Erie hold some potential for further development of a salmonid sport fishery. The whitefish, and now stocked lake trout, have persisted much longer and stronger than anticipated a few years ago. Along with the con-

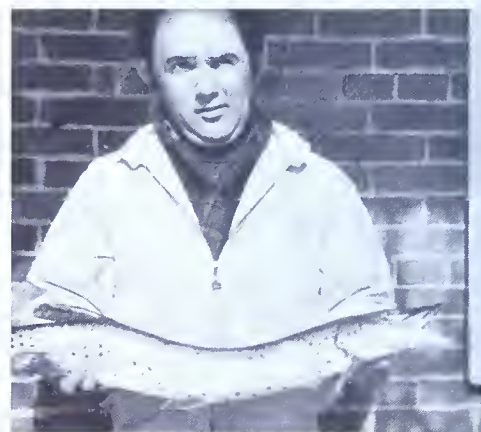
tinuing favorable environment of eastern Lake Erie, these observations are encouraging to the advocates of trout and salmon fishing and the habitat needs of these preferred fishes.

I have dwelled at some length upon the causes for the success or failure of many of Lake Erie's fishes. The point to be made from this evaluation is that the decline and loss of many species of fish was not the termination of fish life in the lake. The causes of such declines (sedimentation, marsh drainage, river damming, increased enrichment, increased lake warming, spawning habitat destruction, pollution, over fishing etc.) may have imposed severe stresses upon many species but apparently favored other fishes. Fortunately, some of these were not preferred as food or for sport. However, the increase in the total biomass of fish life cannot be denied. Finally, the stresses that evolved over the last 90 years or more also have not made such dramatic effects upon the eastern basin ecology as has been thought by many. There exists great potential for many preferred species within the confines of the eastern basin ecosystem despite some of the biological and environmental problems at the other end of the lake.

Lake Erie is not a dead lake. Corrective restoration is possible and to what extent, and how this can and is being managed, will be discussed in a final article on "Changing Lake Erie" in the January issue.



NEED WE SAY MORE?



That's a 32" SIBERIAN MUSKY caught by Dave Griffen of Holidaysburg in Glendale Lake. The photo is one of the very few we've seen of adult Siberian Muskies.

TAKING A CLOSER LOOK

by Tom Fegely



Silent Winter

November is a month of change. Inner signals urge the mammals to take advantage of fall's harvest and birds instinctively abandon their summer quarters and set their wings south.

But the cold blooded inhabitants of the woods and waters must react differently to the shortened days and chilled nights. Since their body temperatures vary with that of the environment, fish, reptiles, amphibians and insects must escape winter's freeze by hibernating or cope with the low temperatures in some other way. Otherwise they will die.

Fish probably adapt best to the rigors of winter. Trout, because they live in fast-moving streams and like cold water, stay active despite the chill. Warmwater fish such as bass, muskellunge and pike go deep, however, since temperatures near the bottom are not as low as on the surface. Bluegill, perch and pickerel move about and feed all winter as evidenced by the increasing popularity of ice fishing throughout the state.

Carp and bullheads probably achieve as close a state of hiberna-

tion as any fish. In late fall they bury themselves in bottom mud and cease feeding. During the winter they lie dormant, in a state of "suspended animation," somewhere between life and death. Fishery biologists have found that a carp's body temperature can drop to within about two degrees of freezing and it will still recover. Lake and pond dwellers must adapt to quicker temperature changes than river dwellers due to the still waters and ice covering.

Wintering fish often meet disaster when snow-covered ice lingers too long, cutting off light and hence the production of oxygen by aquatic plants. In spring they are found floating belly up near shore, the victims of suffocation.

Reptiles and amphibians have their own unique problems. Like fish they are cold blooded, making it necessary to hibernate beneath the frost line or underwater. Frogs and some salamanders burrow in the mud or search out bottom debris under which they become dormant. In warm weather frogs must come to the surface periodically to gulp air into their lungs.

But low temperatures slow down their body functions so that the oxygen absorbed through the skin is sufficient to carry them through the winter.

Toads burrow below the frost line and certain salamanders seek out caves or springs or crawl into a maze of rocky crags that takes them to a moist nook far below the surface. Generally, amphibians can tolerate lower temperatures than reptiles and thus hibernate for shorter periods.

Turtles with their watertight skins and bulky shells have a special problem. And they handle it in a unique way. Although some, such as the box turtle, dig underground, others take to water where they submerge and sink in the mud or seek out the walls of beaver and muskrat houses. Unlike amphibians, however, they cannot breathe through their skin. Instead, the large excretory and reproductive opening beneath the tail takes oxygen from the water through its capillary-rich lining, thus acting as a temporary "gill".

Snakes stay on land and seek crevices beneath rocks or logs. Rattlesnakes typically "den up" in winter, often sharing their quarters with other species. Sometimes these snakes are intertwined into balls of a hundred or more individuals, of various species, to conserve heat and moisture.

In late winter snakes and turtles are sometimes stirred by an early warm spell. Should they wander too far from their winter homes, a sudden drop in temperature numbs their bodies and they freeze to death.

Stream insects remain active much of the winter. Caddisflies spend the season in larval or pupal forms on rocks along with mayflies and stoneflies. In fact, stoneflies often mature early and hatches occur in January and February while snow still covers the banks.

Dragonfly nymphs hide under bottom debris and become inactive. Some adults, however, are thought to migrate like birds and fly south for the winter. Singly and in groups they travel, avoiding the cold death that awaits most other insects.

But regardless of the numbing temperatures and the season's length, we're assured that the first whisper of warmth will once again arouse the dormant peeper and the lazing pike. And sometime soon, maybe even before the ice is completely gone, a spawning northern and a solitary "peeper" will break the spell of another silent winter.



*Tom
Letko
caught
this nice
smallmouth
last November
but you wouldn't
have known about it
unless you were there or
were a Pennsylvania Angler
subscriber! How many friends
do you have that would like to
know when and where the big ones
were caught? You can make them all
friends for life by giving them a gift
subscription to the Angler. It's easy
too, just tear out the green order form in-
side and mail it to us. We'll even send them
a card announcing your gift—at no extra charge!
why
not
now?
thanks!*

PENNSYLVANIA

DECEMBER, 1972

Angler

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The Case For Separate Identity

Last March, on the 106th Anniversary of its creation, the Pennsylvania Fish Commission reiterated its long standing conviction that specialized service is best performed by specialists.

“WHEREAS, the Pennsylvania Fish Commission was formed by an Act of the Legislature on March 30, 1866, for the specific purposes of halting the pollution of the rivers, lakes and streams of the Commonwealth and for the protection, propagation, and management of the fisheries resources; and,

WHEREAS, For more than 100 years the Pennsylvania Fish Commission has employed a highly trained staff of biologists, fish culturists, engineers, law enforcement officers and administrators to carry-out its mandated programs and objectives; and,

WHEREAS, The science of fisheries management, propagation and protection is a highly specialized field which cannot be duplicated by any other group or organization; and,

WHEREAS The Administration of boating laws, rules and regulations, along with the design and construction of facilities, navigational aids, and other programs to regulate, insure the safety of, and provide for the needs of citizen boaters requires a high degree of specialized knowledge; and,

WHEREAS, The differences between the protection and management of fish and waters and the other natural resources of the Commonwealth are so great that it would be impossible to educate, train and develop management skills in any single group which could effectively carry out a general natural resources, or fish and wildlife management, conservation program; and,

WHEREAS, An independent study made by the Wildlife Management Institute, a highly qualified private organization composed of impartial natural resource professionals, for the Joint State Government Commission in 1962 clearly showed there would be no significant savings and no improvement in services provided to the sportsmen and general public by merging the Fish Commission with any other agency of state government; and,

WHEREAS, The program and services provided by the Pennsylvania Fish Commission to the public of this Commonwealth are nationally recognized and have attracted an increasing number of non-residents to visit our state because of the quality of fishing and boating opportunities to be found within our borders;

NOW, THEREFORE, BE IT RESOLVED, That the members of the Pennsylvania Fish Commission, in formal session assembled, on this 30th day of March, 1972 hereby expresses their unanimous conviction that this Commission, its staff and employees should remain, according to law, an independent agency of state government; and that no useful purpose or improvement in service could be served by merging the Pennsylvania Fish Commission with the Pennsylvania Game Commission or with any other agency of government. . . .”

As my first year at the helm draws to a close, I must report that my observations have disclosed a singularity of purpose throughout our entire operation that is seldom seen elsewhere. Despite great internal diversification throughout each bureau, division, and section, the end product of service to Pennsylvania and her visitors has made the Pennsylvania Fish Commission a model operation, admired and envied throughout the entire United States. May I take this opportunity to invite you to share the fruits of our labors in 1973? Enjoy fishing and boating at its finest . . . in Pennsylvania.

Executive Director
RALPH W. ABELE



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Thomas Qualters, Supervisor		Miles Witt, Supervisor	



STATEWIDE with the EDITOR

ON THE COVER, a departure from the photographically recorded scenes which have graced the **ANGLER's** covers during the past year. It is unique, as covers go, inasmuch as it combines the talents of two artists, literally "generations apart." The original sketch was submitted to the **ANGLER** by F. O. Alexander, retired editorial cartoonist for the Philadelphia Evening and Sunday Bulletin. His trademark, "Alex—" has prodded indifferent politicians for more years than he cares to admit! "Let some youngster do the color," quipped Alex.

Fledgling artist Richard Woodward, of Marysville, offered to try his hand; his work speaks for itself.

We received a letter from *Metro Leshak*, of R.D. #2, Northampton, back in August and most of it is reprinted herewith:

"Enjoy your monthly visit to our home, but, for all your efforts in photography, the litho, or printing process, et al., why in H—— can't you put the subscriber's name and address on the back cover of the 'ANGLER,' and not ruin many a good cover picture??"

Ever get the feeling your "one vote" doesn't count? Check the covers *Metro*!

IN JUST A FEW WEEKS our mail carriers will be groaning under the burden of millions of Christmas cards, not just a few of which will carry a seasonally appropriate passage of Scripture, "*Thanks be to God for his unspeakable gift*," (II Cor. 9:15) from that Book whose central theme, according to the Christian Ethic, is the real story of Christmas . . . "kiver-to-kiver."

The counsel offered throughout this Book suggests an unselfish way of life, concern for others—more than self, returning good for evil, etc., and if paraphrased to apply to an "*Outdoor Ethic*," would seem to be rather descriptive of an attitude which pre-

vails among a majority of Pennsylvania Anglers: *an unselfish commitment to the preservation (for others) of God's other gifts to mankind*. It is perhaps the singularly most important motivating force responsible for the great strides made in the field of conservation in the last decade.

Some display it in a personal way . . . with them it's simply a way of life; for others it is manifested through participation in the activities of organized clubs.

I'm thinking now of so many fishermen I've met who have no real need for the limitations of "creel limits"—specifically, those who "catch and release," or take but "two or three for a meal"; and those who have no practical use for carrying a measuring tape . . . their self-imposed "minimum sizes" are far above those in the regulation pamphlet; or the aesthete who rises early to watch the morning mist slowly rising from *his* trout stream or the sun come up on *his* lake . . . though it's all a part of his fishing experience, he could enjoy it as well without buying a fishing license . . . but he wouldn't.

Sportsmen's Clubs generally pick a stream, a lake, a watershed, a locale, or perhaps an entire township, adopt it for their namesake, and then guard it with all the zeal of an 18th Century Patriot; not for private benefit, but for all who use the area. From whence cometh the stranger is of little interest to them.

The Flint Hill Conservation Club, for example, a most clamorous group whose provincial concern is the Lehigh River in the Thornhurst area, was such a club during my tenure in Luzerne County. Here, the Lehigh twists and winds, and upon rounding a bend, putting the nearest cabin out of sight, the angler suddenly finds himself fishing in a pristine setting resembling, to a degree, the Far North. The farther he walks, the more likely he is to be alone and the illusion becomes more pronounced.

Now the Lehigh is a river, rivers are synonymous with fish, and the Lehigh would get its fish, come rain,

sleet, or snow, the Flint Hill boys would see to that! For their private enjoyment? Not so! For nine years I saw the same men arrange for the day off from work to *assist* with the stocking and *watch* the fishing that followed. At club meetings they pounded the table for more fish—bigger fish—or both, but I cannot truthfully recall ever seeing a member fishing until a few days had gone by and the fish had a chance to scatter and "get a little wild."

One man and his jeep pickup were as much a part of the stocking scene as the fish truck itself. His jeep carried the buckets of fish through snow covered fields to the river, hauled the helpers to the next stop, and on more than one occasion, towed the mired fish truck to dry ground. He never fished . . . but it was *his* Lehigh.

Across the county, a handful of volunteers from the Harveys Lake Rod & Gun Club picked up two truckloads of litter left behind by hundreds of thoughtless ice fishermen one winter, and disposed of it at a nearby landfill. You might say that this was, "Litter'ly," *returning good for evil*. The volunteers were not the most active fishermen I've known, but it was *their* lake.

We've mentioned but two clubs; these, out of familiarity. But hardly a month passes without tribute being paid to similar groups STATEWIDE by our Waterways Patrolmen in their Notes From The Streams.

Why then, if such a goodly number are deserving of flowerly tribute, are our watercourses being desecrated in the name of progress? Why is anyone who opposes this wanton destruction branded, disdainfully, a "strict preservationist"? Why? Too many have yet to see the light! Too many of us are "Johnny-Come-Latelys" to the conservation movement; we've taken too much for granted—for too long. It's time for action!

December is traditionally a month of giving. I submit it is an excellent time for reflection; a time to consider those natural gifts with which Providence has so abundantly blessed all Pennsylvanians; a time to contemplate a future course of action toward their preservation. Make it a time of rededication . . . recommitment. "Strict Preservationists" aren't all that bad!

Speak out to protect Pennsylvania's waterways with all the vigor you can muster! It's your privilege! It's your duty!



FISHING OUTLOOK

By-- Stan Paulakovich

Throughout the Commonwealth most lakes and ponds will not have safe ice until well into December. Wayne County, up in the northeastern corner of the state, should have safe ice by the middle of the month. Ice here gets to be 24 to 30 inches thick and it's not unusual for this ice cover to remain well into April. Trout, perch, walleye, pickerel, blue gills and crappies give you plenty to choose from in this very picturesque area.

Veteran Waterways Patrolman Harlan Reynolds, 17 years in the county, likes ice fishing best of all. His favorite prey is the Yellow Perch. Harlan says, "When it comes to tasty eating, there's not too many fish better than perch fillets fried to a turn. And, at \$1.25 or more per pound, it's nice to have a few meal-sized packets of these fillets stashed away in the freezer for future use. The fish don't have to be big either; an eight or nine inch fish will give you two nice portions of meat if you're careful when filleting them."

Waterways Patrolman Reynolds rates the ice fishing waters in his district in this order: Best bet is Duck Harbor Pond. It lies just off Route 191 near the town of Lookout. Deep, over 80 feet in some spots, it contains jumbo perch as well as lunker brown and rainbow trout and nice chain pickerel. Usually this is frozen over in early December and stays that way until well into April trout season. Tip-ups, with small lively fat head minnows no more than two inches long, work best. Jigging with small ice jigs or darts with a meal worm, mousey, or perch eye attached, are what most of the local ice fishermen use here. Sometimes jigging with small garden worms or dead minnows works too.

Second choice for December fishing is Long Pond. This lies just off Route 670 near the town of Bethany. It contains good numbers of "hump-backed perch as well as trout, bluegills and chain pickerel. Not nearly as deep as Duck Harbor, its max-

imum recorded depth will be in the twenty foot range. Access to this and other lakes in the county is kept open by County, Township or Fish Commission crews. This is normally accomplished in one or two days so don't expect to arrive six hours after a two-foot snowfall and see the area plowed!

Third on the list is Millers Pond near the Fish Commission Hatchery at Pleasant Mount on Route 247. No trout here, but it has chain pickerel, yellow perch and nice big fat bluegills. Fishermen who jig here without the benefit of the wire extension on the jigging rod employ a tiny bobber to signal the sometimes delicate strike of a biting fish. This wire extension, by the way, is a necessity when bluegill fishing. You can use the wire that is sold in the lure manufacturing kits; it is about the right diameter. A short piece four or five inches long, taped or wrapped on to the end of the jigging rod, is ample. Be reminded that on this lake as well as any Fish Commission or State owned lake the operation of snowmobiles or other vehicles on the ice is prohibited.

175 acre White Oak Pond near Aldenville on Route 170 has been a good perch area in the past. Crappies, not too abundant in Wayne County, have been showing up in good numbers here at White Oak and perhaps this will be the year when ice fishermen will start to take them. Small darts, jigged slowly, starting from the bottom and working upwards towards the surface is the technique used.

These darts should be no more than three quarters of an inch long with a one inch bucktail. Green head, white body and white bucktail combinations have proved very successful in Western Pennsylvania the last few years.

Long, narrow and deep, Prompton Dam, off Route 6 is roughly 280 acres in size. It has an average of 40 foot depth. Sizable yellow perch and bluegills, along with a good walleye population, inhabit this extremely pretty spot. Walleyes here have been finicky and slow biting in the past. When they do bite, they range well into the 20 to 25 inch class. Small minnows are the most popular of baits and fat heads hold up longer and friskier than most other minnows. Start your fishing in the deeper areas of the lake early in the season, and as the weeks roll by work gradually closer to the shore.

For some reason, Upper Woods Pond, off Route 371, deep and isolated, has never been good for ice fishing although it offers big rainbows and browns, tiny 7 to 8 inch kokanee and a few perch and bluegills. Minnows, alive or dead, are not permitted to be used as bait in this lake. Rose Pond, off Route 191 near Rileyville, lies in a small glen and is well protected from the elements and is generally free from the wintry winds that whistle down on the ice. Rose Pond has nice yellow perch and bluegills. Falls Dale Pond, off Route 371, is relatively shallow, 40 acres in size, and has yellow perch and bluegills.

Abounding in panfish, like so many Wayne County lakes, Ontelaunee Reservoir in Berks County won't have safe ice as early as those in the northeast. These fishermen chose a small protected bay, off the main body of the lake for their fishing spot.





NO GENERATION GAP—

Your magazine sure makes winter a brighter season, it helps bring back the happy fishing experiences of the past summer.

I've been fishing as a boy in Pennsylvania and the last few years in Ohio for 35 years, and it has been a big influence on my life.

Keep up the good work, write more articles for the young, the beginning fisherman. There is no better way to reach a boy than with a fishing pole. I'm sure your magazine helps in a lot of ways to fill in the generation gap.

Then again, there never was a gap between a father-son fishing team.

I thank you for many fine hours of reading pleasure.

CARL L. HANDS
Cuyahoga Falls, Ohio

WEAK POSITION?

Reference is made to your August 1972 Angler issue, with particular attention to letters written by B. Clapsaddle, Arendtville and F. Blackstock, Glenshaw, and your extremely weak position in support of trout stocking practices.

The trout fishermen in my neighborhood (Luzerne County) (and including yours truly) have witnessed via the written and verbal media (over the last 20 years) a sense of "Angler" self-pity rather than one of examination of fact. We need only ask, "Who at state level examines or observes the practices carried out by personnel responsible for stocking and patrolling?" From our vantage point, the stocking and patrolling endeavors are carried out by men who are neither sportsmen or responsible employees. May we suggest that you make it a practice to conduct "field trips" during the stocking season and see for yourself. On behalf of the non-club fisherman, I am

Sincerely,
GEORGE ANISTRANSKI,
Wilkes-Barre, Pa.

P.S. If you feel you cannot print this view, fine . . . we understand.

If you will read our comment again, I believe that you will find that we tried to examine methods of stocking for suitable local application. Those listed have proved quite satisfactory in many areas. Apparently we "confused the issue with facts."

Stocking and patrolling are delegated to the Waterways Patrolman assigned to the county (or, in his absence, a competent deputy). We don't intend to debate your "angler self pity" theory; you're entitled to your opinion in that respect.

We will submit, however, that during 19 of those 20 years to which you refer, Luzerne County was served by: our present Chief of Law Enforcement, John Buck (6 yrs.); our present Deputy Chief of Law Enforcement, Ed Manhart (4 yrs.); and your Editor (9 yrs.). Non-Sportsmen? Irresponsible employees? We'll debate that and defend our record . . . anytime. You really struck a nerve Geroge! Ed.

ILLOGICAL AND ABSURD!

I am a serious fly fisherman and have been for the last 20 years. Therefore, I am in favor of "Fly Fishing Only" areas and "Fish for Fun" areas. In fact, I have used the fish for fun facilities heavily at Brookville, on Kettle Creek, and Marvin Creek.

However there is one aspect of the "Fish for Fun" areas which should be criticized. The no wading restriction is illogical and absurd. I find that most of the water in these "Fish for

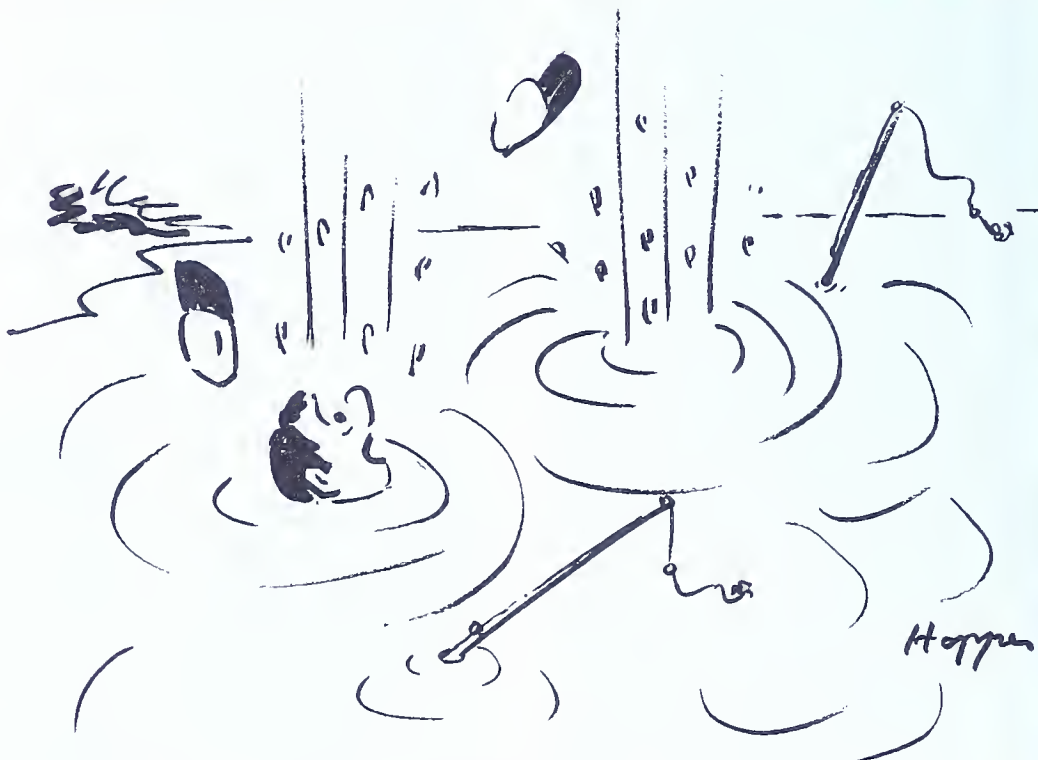
Fun" projects unfishable with a fly rod. Granted, the stretches of water now contain more trout than they ever contained, but with the no wading regulation, these fish may as well be in the Pacific Northwest as far as I am concerned.

I will continue to criticize the Fish Commission for this silly regulation to all and sundry until I receive a logical reason for the no wading restriction or until the restriction is removed.

TIMOTHY L. KYLE, Pittsburgh

I too am a serious fly fisherman and I've been at it for the last 17 years so I guess I'm at least as qualified as the average duffer to comment on fly fishing. I know what you mean when you complain about the no wading restriction, it does present a different and sometimes frustrating experience. The easy drift straight upstream, or slightly to the side upstream, is replaced by a cross or quarter current cast which creates really complex drag problems in some places. Also, the backcast is, or can be, much trickier with trees, fences, guardrails, etc., instead of nice open space or stream bed. These problems can be a bit of a pain but by selectively fishing certain areas or by proficient casting (possibly with a weight forward line to minimize backcast) one can overcome most of them.

I am sure that, as a serious fly fisherman with 20 years experience, you are competent to cast well enough to welcome these problems as a challenge and not an obstruction. Obviously there are some spots where not even the best angler can



"MAYBE WE SHOULDN'T BE WADING, SOME SAY THERE'S A LEDGE AROUND !"

make a proper presentation of his fly from the bank. The best one can do is bypass these spots and fish another pool or riffle.

Now that I have agreed with you that the no wading restriction works some hardship on the angler let me disagree with your evaluation of it as a silly, illogical, or absurd regulation. There is a quite logical reason for this rule and I think it adequate to remove all basis for your criticism. "No Wading," means just that, stay out of the stream; not because it makes anyone a more effective angler or because it would pollute or destroy habitat, but because it creates insurmountable problems of human conflict. This is not a theory, it is based on experience. If we lived in a world where everyone aspired to the same ideals, adhered to the same ethical principles, observed the same courtesies, and had the same experiences and background for a frame of reference, it would be a peaceful scene indeed. Unfortunately, we live in a world where people have very different ideas about courtesy, attitudes, sportsmanship, and what is right or wrong. This is as true of angling as it is of politics, business, or any other aspect of human endeavor.

"Fish-For-Fun" projects are a case in point. Owning a fly rod and possessing the ability to use such a fly rod is no guarantee that an individual will be aware that it is poor taste to stroll through a pool of rising trout which is being fished by one or more fellow anglers. If you do not feel this creates conflict, I suggest you try it. This, in a nutshell, is the reason a restriction on wading was imposed. The Fish-For-Fun areas generally cover a limited section of stream and receive heavy usage. One or two uninformed, thoughtless, or just plain malicious anglers can spoil a lot of sport for everyone else. Heavy use and wading are simply incompatible. Rather than have a situation which creates conflict and is in general contradiction to the aura of genteel courtesy and refinement that is theoretically a part of fly fishing, it is much better to remove the cause of conflict. I'm sure you can agree with that.

Think about it, unless you confine your fishing to Fish-For-Fun areas it is inconceivable that you haven't had your angling disrupted by some poor beknighted soul blundering through a pool and putting down every trout in the area. Where I grew up it was in poor taste to even fish the same pool as another angler. Times have changed and I have been subjected to some incredible breaches of common angling courtesy, including having some phillistine wade right through a pool

while I was casting to a freely rising fish. In most instances, these are purely innocent acts committed by people who simply don't realize they are doing anything wrong. How much "fun" do you think there would be in "Fish-For-Fun" if wading were permitted? We'd probably have to call it "Fish-Or-FIGHT."

I hope I have given you some insight into the regulation which you find offensive. It is to handle a people problem, not a fish problem. If you have further comment or criticism, I will do my best to respond.

DELANO R. GRAFF, Asst. Chief
Division of Fisheries

BON VOYAGE—

I have lived in Pennsylvania since I was born. I am 14 years old and I have been fishing in Pennsylvania since I was 8 years old. I am going to move to North Carolina and I would like to thank all you wonderful people at the Fish Commission for sending me all the information and literature when I asked for it.

I would also like to thank the Waterways Patrolmen for keeping the fun in fishing. I have enjoyed the Angler Magazine an awful lot. I don't think I'll ever find another state as friendly as Pennsylvania.

VICTOR MILAZZ, Johnstown

We'll miss you too Victor. Tap Dad for a 3 year subscription—put it on your Christmas List—we'll see that you get it.
Ed.

LIKES COVERS

I have been receiving "The Angler" for about six years now. It is a great magazine. The covers are terrific since you switched to life-like photos.

Keep up the terrific work with our magazine. I agree with your new ruling of only citation fish photos in your "Fish Tales" section.

FELIX A. VOLPE, Norristown

Glad you like the covers Felix, but I suppose we threw you a curve this month. We just couldn't resist the "story" told by the artist (see comment on page 2.) Ed.

FUTURE EMPLOYEE!

I am writing this letter to congratulate the Fish Commission on the great job it is doing for fishing in Pennsylvania. With your highly successful stocking program you are increasing the range of many fish which were at one time unavailable to many Pennsylvania anglers such

as muskellunge and northern pike. Trout fishing has also improved thanks to the excellent work of the cooperative nursery branch.

With many of our once heavily polluted rivers and streams supporting increasing numbers of fish, along with newly created reservoirs and lakes, fishing should be even better in Pennsylvania in 10 years. In my own area I have noted how visibly cleaner both the Schuylkill and Delaware rivers are and many areas of these rivers are teeming with minnows which could support a good game fish population.

I think your magazine is great and I enjoy it more than those national outdoor magazines. After I graduate from Cardinal Dougherty High School, I plan to attend college and major in fisheries biology and later get a job with your Fish Commission. Keep up the good work!
JOSEPH V. CHIARETTI, Philadelphia

WELCOME VISITOR—

May I add that one and two day trout fishing excursions to the north-central Pennsylvania watersheds have become annual pilgrimages for my Uncle Steve and myself over the past six years; these trips are taken during my family vacations to my native home of Sharon, Pa. We are members of the growing number of fly-fish for fun, catch and release fishermen.

The Pennsylvania Fish Commission is to be highly commended for their part in providing the fine quality and great quantity of trout fishing in this area to which we return each year. My yearly non-resident fee is money well invested and so is the check I've included for a three-year renewal subscription to the "Angler". I couldn't be without it. Keep up the good work and continued success with your great magazine.
KEN PARKANY, Manchester, Conn.

HOW GOOD IS A GOOD FRIEND?

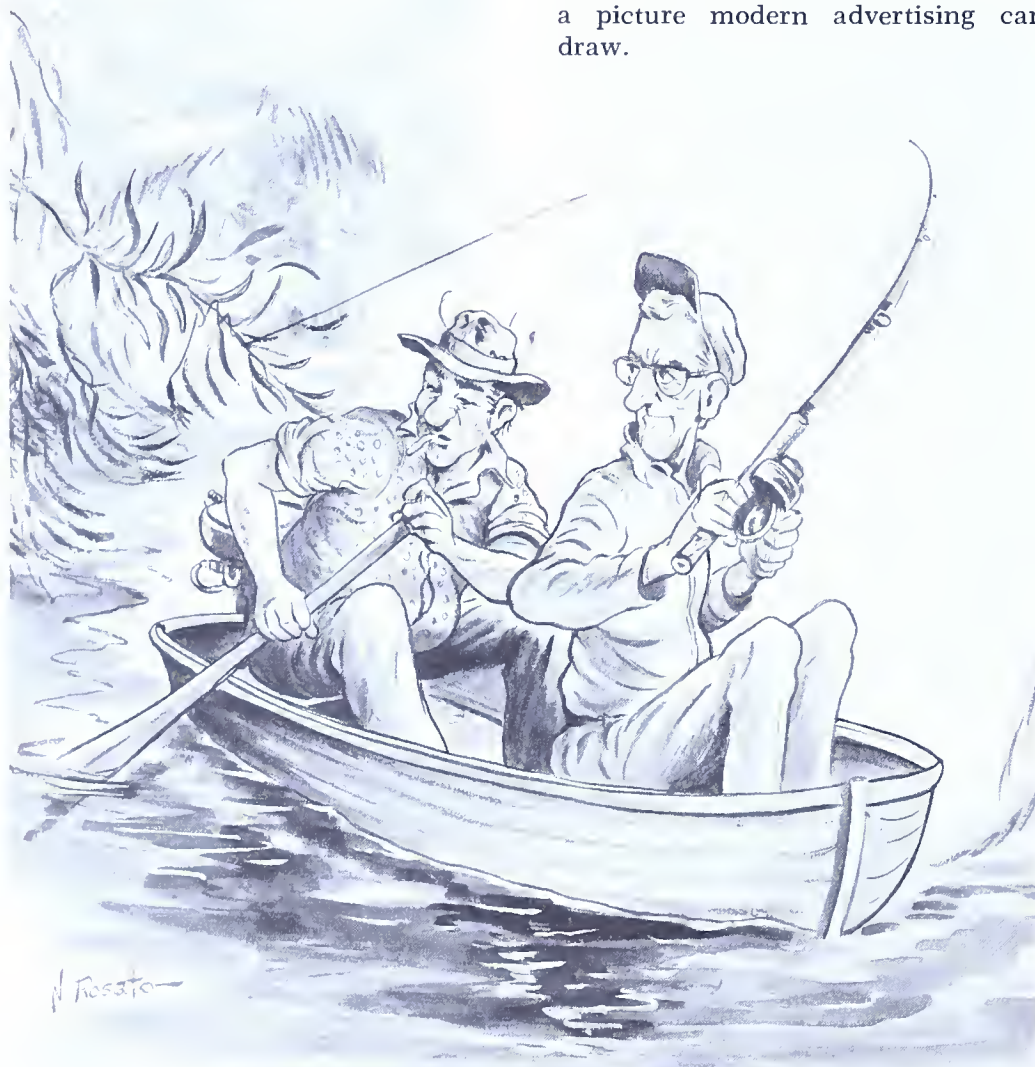
Good enough to remember that you don't have a boat? Good enough to make a few extra black gnats . . . he knows how well you like them.

IT'S YOUR TURN!

You can give him the kind of Christmas present he will appreciate. Check our special gift offer on the back cover.

GREEN GRASS SYNDROME!

by Richard F. Williamson



Available to **PENNSYLVANIA ANGLERS** are many aids that will reveal some very good fishing . . . right here in the **KEYSTONE STATE**.

The grass on the other side of the fence is not always greener.

Right here in Pennsylvania there are wilderness areas where the imprints of civilization are very slight, if visible at all; where sparkling waters still contain native trout. There are lakes and ponds in a variety of sizes that are the homes of bass, chain pickerel, walleyes, and even northern pike and muskies. There are majestic rivers with stretches that have escaped pollution.

And the Pennsylvania fisherman does not have to travel hundreds of miles by car or thousands of miles by plane to reach them—and does not have to worry about the possibility of incompetent guides and miserable housing, things that can turn a fishing trip into a nightmare of disappointment no matter how glamorous a picture modern advertising can draw.

Please pardon a couple of personal references.

A few years ago, this writer spent ten days fishing the St. John's River in Florida in the much advertised "bass capital of the world." First, the guide reserved for me was more interested in drinking at night than in fishing by day and my trip was spent with a series of guides, none of whom I really got to know. Second, the fishing was downright lousy, and I was told that I "should have been on the river a month earlier."

In the summer of 1971, I made reservations for September at a fishing lodge in Canada. In August, while visiting friends on the St. Lawrence River, I drove to this camp—and cancelled my reservation on the spot. The camp was like a small village, noisy and over-populated; the small lake was cluttered with boats. Fishing there would have been like fishing in the middle of a crowd gathered around an old-fashioned town watering trough.

Then, last summer, I spent a day with a friend on Kettle Creek, in Clinton County, right here in Pennsylvania. It was the very best period of the dry fly season, but we fished about four miles of the creek without meeting another angler. We fished a stretch with breath-taking beauty and there was not a bit of litter in sight. We encountered water that challenged our best fishing skill and we caught trout. No monsters. Just trout that made us glad we were fishermen and which, almost without thinking, we returned unharmed to the water.

Just that one trip convinced me that grass is not always greener on the other side of the fence.

Pennsylvania is a big state that contains a lot of water offering great fishing potential. How do you go about enjoying it?

There is an easy way, and also a hard way.

I once had a fishing friend who had an insatiable curiosity about new fishing water. He drove around the countryside, and when he saw a little tributary of a trout stream, he would park his car and explore the brook. In this manner he discovered a couple of mountain streams where we



spent some interesting afternoons fishing for beautifully colored native brook trout. The streams were not on any maps and, as a consequence, we never met another angler on them.

That's the hard way—exploring the countryside and looking for fishing water.

There is an easy way, too, thanks to the Pennsylvania Fish Commission. All the fisherman has to do is to use the little booklet that he receives when he obtains his fishing license, and to acquire *and use* the county fishing maps that are published by the Fish Commission. They are all the "guides" he needs.

First, consider the license booklet.

It lists, county by county, the streams, lakes, ponds, and reservoirs which are public fishing waters stocked by the Commission. It contains a list of areas which are open to fly-fishing only, under special regulations, and also some fish-for-fun projects, where the angler may catch all the fish he wishes (or can) but must return all unharmed to the water. Finally, it also contains a directory of the Commission's Waterways Patrolmen, giving the county, home address, and telephone number of each Patrolman.

The booklet is, in effect, a complete guide to public fishing waters in the Keystone State. The listing of the Waterways Patrolmen is especially valuable. These men know every foot of the water in their districts and, no matter how busy they may be with their regular duties, they always have time to answer requests for all kinds

of fishing information.

The fishing and boating maps of all 67 counties in the state are *mines* of information. To illustrate, take the map of McKean County.

On one side is a map of the complete county with all highways, back roads included, printed in broad black lines and carefully numbered, with a mileage scale to help calculate distances. Towns are also marked. The reverse side lists all trout waters in the county—a total of 24 locations in McKean—each one of them indicated by a circle printed on the map and with the water area printed in red ink. It also lists the warm water areas, which are printed in blue ink and indicated by triangles on the map.

There is additional information about the warm water areas, letter symbols showing the species of fish found in them. For the famous Kinzua Dam, for example, the map notes these species: Smallmouth bass, carp, muskellunge, walleye, northern pike, suckers, bullheads, bluegills, crappie, yellow perch, largemouth bass, and trout.

As an added bonus, each county map lists seasonal hot spots. For McKean County, the list is:

"Kinzua Creek, south branch, all season for trout.

"Allegheny Reservoir (Kinzua Dam), for perch, crappies, and smallmouth bass in spring and fall.

"Oswayo Creek, for smallmouth bass in June and fall months."

In counties where they have been established, waters open to Fly Fishing Only are marked with the symbol FFO, and those where all fish must be returned to the water are indicated with the symbol FFF (Fish For Fun).

And if the angler desires still more help, information centers are listed. There are five in McKean County—at Smethport, Kane (two), Mount Jewett, and Bradford.

For the angler who has his own boat or for the boater who enjoys being on the water but does not fish, the maps also list access areas—for example, two on the Delaware River in Northampton County, eight on various waters in Pike County, including the famous Lake Wallenpau-pack, four on ponds and lakes in Sullivan County—including one with the intriguing name of Bear Wallow Pond—and so on for every county in which access areas have been developed.

Editor's Note: Most fishing license

issuing agents can supply you with a free map of your county. To get a complete STATEWIDE set, check that special offer on the back cover of this issue . . . it will make a fine Christmas present . . . for yourself, or a fishing pal.

Also available from the Fish Commission, without charge, is another booklet, Fishermen's Guide and Boating Guide to Pennsylvania Waters and Access Areas.

Sometimes fishing information can come from unexpected sources.

Years ago, when bass fishing was fabulous on Wyalusing Creek in Bradford County, we often stopped at a little gasoline station along Route 106 just north of the town of Wyalusing, for a nip of "home brew." (Now you know how long ago that was!) One afternoon the old fellow who operated the station told us we were wasting time by driving 12 or 15 miles upstream to fish. He suggested that we park at his station, walk down a small hill and across a field, and try the creek at that point.

We followed his directions to a long, rock-bottomed pool that for several years produced great bass fishing, especially with deer-hair bass-bugs at night. We could hear (but not see) traffic on Route 106, but I don't recall that we ever found another angler fishing that hole.

Sitting in a barber shop in Williamsport one morning, I could not help overhearing conversation between the barber and a young man

continued on page 29



JERKY — *THE FOOD THAT DOES IT ALL*

by John Weiss

During the course of my outdoor writing career I've come in contact with many whose life-style has not been altered by the progress of modern society. I envy the hardy individuals who live in the *outback* of the northwoods country, relishing the same simple pleasures in life as did their forbears.

The lumberjacks, traders and prospectors considered jerky a staple part of their diet, along with sourdough, pemmican, harvestable grains and fish. Their jerky was usually prepared from the venison of game animals such as deer, elk, caribou and moose. They favored jerky because of its easy preparation, high protein content and quick energy producing feature. An added benefit was that jerky required no refrigeration, so it could merely be chucked into a coat pocket and eaten later while navigating down a racing river in a canoe or panning for gold in a small meandering stream. Many historical accounts reveal that jerky was sometimes stored for over a year with no seeming effects of deterioration or spoiling.

Today, on-the-go sportsmen can likewise savor this toothsome snack, whether their jaunts are confined to suburbia, or occasional treks to the outback. With the convenience of a modern kitchen, little time and effort is required on your part. On a diet? You'll also like the non-fattening feature of jerky. Literally, it's *"the food that does it all."*

Modern jerky, however, is most commonly prepared from various cuts of beef. Of course, should you be one of the fortunate who bag a whitetail, you can use the lesser cuts of venison that would normally be discarded, or ground into deerburger. We are partial to using round steak and chuck steak. But when the budget starts screaming we switch to less expensive cuts such as flank steaks and briskets, which also produce fine results.

Your choice of meat should be about half an inch thick and relatively free of fat. Any existing fat should be completely trimmed off.

Start by slicing the meat into strips that are one-half inch wide and six-inches long. Place one layer of the sliced strips in the bottom of a glass bowl. Lightly sprinkle the meat with a flavored salt of your own choosing. We prefer hickory-smoked salt, but onion salt or garlic salt are also fine. Then add the next layer of sliced strips of beef and repeat the salting process. Add as many layers of meat as your needs dictate, but since jerky seems to disappear quickly, it's always best to prepare more than you first estimate you'll need.

Next, cover the bowl and place in the refrigerator overnight. This will allow sufficient time for the meat to become pleasantly seasoned. The following day, place the strips of beef on an ungreased cookie sheet and pop the entire works into the oven. We don't want to cook the meat, just dehydrate it, so set the oven temperature at about 180 degrees. The drying process will take approximately five hours. When finished, the jerky will take on a coal-black appearance, though the meat is neither burned nor charred. As soon as the jerky has cooled for a few minutes it can be eaten . . . but watch out for the stampede!

We keep our jerky in a wide-mouthed glass jar with a screw-top lid. No special preservation techniques are necessary. The jar merely keeps the jerky clean and free of dust and the like.

Jerky can be taken anywhere. It's a special hit on auto trips in which nobody wants to fuss with kitchen utensils, garbage disposal and sticky messes. Take jerky to the office. Give it to the kids to take to the movies. Take it on camping and fishing trips. For a quick pick-up, stow a few slices in your hunting jacket before your next outing.

But above all the advantages of jerky, the best one of all is its superb beef flavor. Give this nostalgic repast a try. It will become as common a word around your household as it was around the log cabins of our ancestors.

→
The first step in making jerky is the slicing of the meat into long narrow strips which can be later cut into shorter lengths that will be more convenient, both in processing and in carrying along on that winter fishing trip. Inexpensive cuts of beef or venison will make excellent jerky . . . the choice is yours.



←
One layer at a time, place strips of meat into a glass bowl, season, then add another layer. When the bowl is full, cover and put it in the refrigerator over night. The jerky maker of today has a distinct advantage over his ancestors with a variety of seasoned salt available. You can use onion, garlic, or smoke salt or for that matter, any additional flavoring you may choose.

→
Seasoned strips of meat can be placed on a cookie sheet, strip of foil, or when making larger quantities, skewer each strip with a toothpick and hang them from the oven rack. Other methods would undoubtedly work as well but this method is one of the quickest as it affords greater circulation and even distribution of heat on all sides of the meat. Experiment, you might find a better way.



←
The finished product appears to be coal black but the meat is neither burned or charred. It can easily be stored in wide-mouth glass jars or in plastic bags. Remember, jerky is dehydrated meat and can be re-hydrated for use in soups or stews. The jerky will absorb the moisture and swell up as tender meat again.

The Spider

and the fishing line

by Frederic Doyle



The next time someone hands you a line, a fishing line, that is, take a second look. In all probability it is made of synthetic fibers.

While it took us from the beginning of time until the middle of the 1930's to produce this fiber, spiders had mastered the art a million or so years ago.

Viewed from an objective angle, a spider eats a couple of house flies, runs them through her digestive system and out her spinnerettes, those three sets of jets in her rear, and spins a line "three times stronger than iron."

Before synthetic fibers were produced, spider webs were used for reticles in gun sights, cross hairs

in surveyers' instruments, bomb sights and other precision instruments. When the necessity for mass production of these webs arose, spiders wouldn't cooperate. Confined, like the gingham dog and the calico cat, they ate each other up. As that necessity became acute for strong fibers for parachute cords and other tough fabrics we went to the spider "to consider her ways" and came up with nylon.

The Du Pont Company claims credit. More specifically, Dr. William H. Carothers, a chemist with the Du Pont Nemours and Company of Wilmington, Delaware mixed up a batch of coal, air, water, petroleum and natural gas and named the mixture

"66". He squirted it through home made spinnerettes and revolutionized fishing.

Before nylon and the multitude of trade names for this product, silk, cotton, linen, gut, and others fibers were used for fishing lines. Our friend Izaak Walton used horse hairs. "First let your Rod be light, and very gentle," he advised, "and let not your line exceed, I say, not exceed if you can attain to Angle with one hair you shall have more risers and catch more fish."

Thanks to the spider and the mechanical spinnerettes of modern industry, we no longer have to depend upon cotton, linen, or horse hairs for our fishing lines.



Two common sights in the garden are the spider's web (above) on a dewy morning and the silken egg cocoon (left) seen in early autumn.

Sharp Hooks—

LUNKER

INSURANCE

by Reid Kling, Jr.



The big trout was lying on its side, completely exhausted from a twenty minute battle, and just inches from the rim of the landing net. Just when success seemed assured, the hook pulled out and my trophy fish drifted slowly downstream and sank from sight. I stumbled ashore in a state of shock that is known only to fishermen, wondering what had gone wrong. Why had the fates dealt me such a low blow—or had they? A quick inspection of my terminal tackle told the story. It hadn't been bad luck, just plain stupidity on my part. A very dull hook had cost me a trout that would have gone well over the five pound mark.

This discouraging episode occurred some thirty years ago on Clinton County's Fishing Creek. I was a bait fisherman then, fishing for big trout with night crawlers, and getting hung up quite frequently as I walked my bait along the stream bottom. This constant bottom bumping had dulled my hook so badly that I had been lucky that I had hooked the fish in the first place.

I made a promise that day, as I

sat on the bank berating myself for being so stupid, that it would never happen again. It never has! Since that disheartening day I've been a regular nut about keeping my hooks sharp. Many times since, I have noticed my fishing partners shake their heads and give me sidelong glances when I get a hook hone out and go to work.

Much has been written about the care of tackle, and how those long winter nights can be well spent cleaning reels, checking lines and leaders, and the myriad of other jobs that are necessary to ready one's equipment for opening day. These articles mention in a casual way "check your hooks," but how many anglers do it in a conscientious manner? How many of our readers buy a new plug or other lure and throw it in the tackle box to be tried out on that next fishing trip, never giving a glance to the condition of the hooks? Most new lures appear to have sharp hooks, but the truth of the matter is that they are not nearly as sharp as you can and should make them with a little work.

Why am I such a nut about needle

sharp hooks? For the simple reason that I am convinced that dull hooks result in more lost fish than all other reasons combined. Time after time I've seen big bass throw a plug, large trout just roll off the hook, and other heartbreaking losses that occur simply because the hooks were not sharp enough. When I speak of sharp, I mean *needle sharp*!

Drag the point of the hook across your thumbnail with as little pressure as possible. A sharp hook will bite into the nail. With small fly hooks such as sizes 18, 20, and smaller, a good test for sharpness is to squeeze them between your thumb and forefinger. If they are sharp enough, they will bite into your finger.

Incidentally, I tie my own flies and I never bother to check the hooks as they come from the box. Each hook is put into the vise upside down and the point honed sharp before I make the fly. This is an extremely important operation if you fish the smaller flies with the long leaders that are necessary. 6X tippets have a very low breaking point, especially if much of a strike is needed to set the

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Left. A variety of common sharpening aids used by the author to maintain a needle sharp point on all of his hooks.

Right. Hook bonnets are inexpensive plastic covers that will protect those points and eliminate tackle box tangles.





LOOKING BACK

by Charles Furimsky

illustrations: Richard Price

The carp pond in the park hadn't changed much in twenty years. It was still only an acre, oblong in shape, with a crumbling stone wall that dammed back the murky water. The overflow was able to cascade down the middle of the wall, where several stones were missing. Around the pond were many types of trees, with ancient spruces towering above all. The hard, dusty clay shoreline separated the trees from the water. And at the head of the pond, the end opposite the dam wall, a slight grade led up to the main road that went through the park, where passing cars could get a glimpse of the pond. Overall, the pond looked everlasting, but tired. The pond seemed as worn out as its carp, but still able to come to life when called upon.

I had spent many years as a child here. The pond was like my fishing classroom. I had no teacher, and only a crooked casting rod with a rusty

reel for "school supplies." My class met after school, on weekends, in the sun, in the rain, and almost always during the summer when my real school was dismissed for vacation. My classmates at the pond then were about my age, six through ten, and they had many reasons for coming. Learning how to fish was only one reason.

Some wanted only to investigate; they looked along the shore, in the water, and around the trees, as if they had lost a contact lens. A few only wanted to bother those who were fishing. They would throw stones, knock over rods, and duck through the woods like infantry, planning their next guerrilla attack.

There were also many types, even among the fishermen. It all depended on the fish and the mood of the young anglers. When the carp were biting, everyone was interested only in catching fish. Doughball suddenly became

valuable, better than the next guy's, and always secret in its ingredients and formulation. Bread slices, to wet and squeeze into dough, were filched from the trash cans, where stale lunches were discarded; rods and lines were watched with hypnotic gazes. The carp mouthed the baits and raised the pinches of mud used to signal a bite as the lines twitched.

When a reel "spun", a hero was proclaimed. Almost every fisherman, except a jealous, determined, or disappointed one, would run to the lucky battler. Screams were let out by those running to see the fish, rods were kicked over, and legs slipped into the mud and water as the congregation grew around the hero. He struggled to reel in as fast as possible. The half dozen knots connecting his worn line, which resembled the tail on a kite, would strain through it all. In a matter of moments, several hands had reached out for the dazed



carp, by now being hauled in by the line, which was usually grabbed by an overly helpful youngster. To the passing cars this scene might have resembled a drowning, as the boys huddled around the victim, the fat scarred body of a beaten carp.

"What are you going to do with him?" "What did you catch him on?" "Is this the first one you caught?" "Can I have him?" "Do you want him?" But the hero just looked at his fish, and he never answered one question, if any he heard.

After a few minutes someone mentioned that he was going back to his rod, so he could catch one too. That started the group to disperse slowly, but the carp stopped biting as quickly as they began. The young fishermen soon lost interest in watching

their rods and started other pursuits.

One boy forgot his lunch, and the hunger pains were too much for him. I'm sure he wasn't the first boy to taste his doughball and proceed to finish it. Two other boys were taking turns trying to stick their knife into the stump of an old tree. Another fisherman turned to hunting and chased a baby rabbit that had appeared. And of course, no lake exists with boys around, without a stone skipping contest developing sooner or later.

The day passed and the young fishermen began to depart. One clever youngster hid his ball of dough, so he could have emergency bait if he forgot to bring it the next day. Birds or field mice would almost always get it, but he would probably accuse his best friend, who saw him hide it.

On the other side of the lake, the hero left, dragging his carp on the rope stringer he finally unraveled. He was proud, and took the main road home, instead of the path through the woods behind the lake. He had no idea of the reception he was going to get when his mother saw the carp, or the expression on the trash collector's face when he would come the next week to empty the garbage cans.

When everyone had gone, a few carp surfaced to cruise for some slices of bread that might have been thrown in by a disgusted angler. So ended the day at the park pond, and my reminiscing of those childhood fishing experiences. As I walked

away from the lake toward my parked car, I thought it strange to find my memory could recall my beginnings here as a young fisherman . . . so long ago. I thought of those people who never learned to fish, but always ask how anyone can just sit and watch their rod for a fish to bite. How was this fun? They could never know that human nature, greed, cooperation, wit, patience, and an endless amount of those things that develop a person's character and personality can be learned at a muddy carp pond. Since my childhood days there, I have fished from Maine to Florida, but none of my fishing trips will ever make me forget those early experiences . . . at the carp pond.



Gift for a Boy —

What is the gift you gave your boy?

A glamorous game, a tinsel toy

A whittling knife, a puzzle pack

A train that runs on a curving track?

Perhaps a Boy Scout book or a real live pet.

But are these the things,

A boy really wants to get?

Or should you give him a day of his very own,

Just your boy and his dad alone.

A walk in the woods, a game in the park,

A fishing trip from dawn to dark;

Give him a gift that only you can . . .

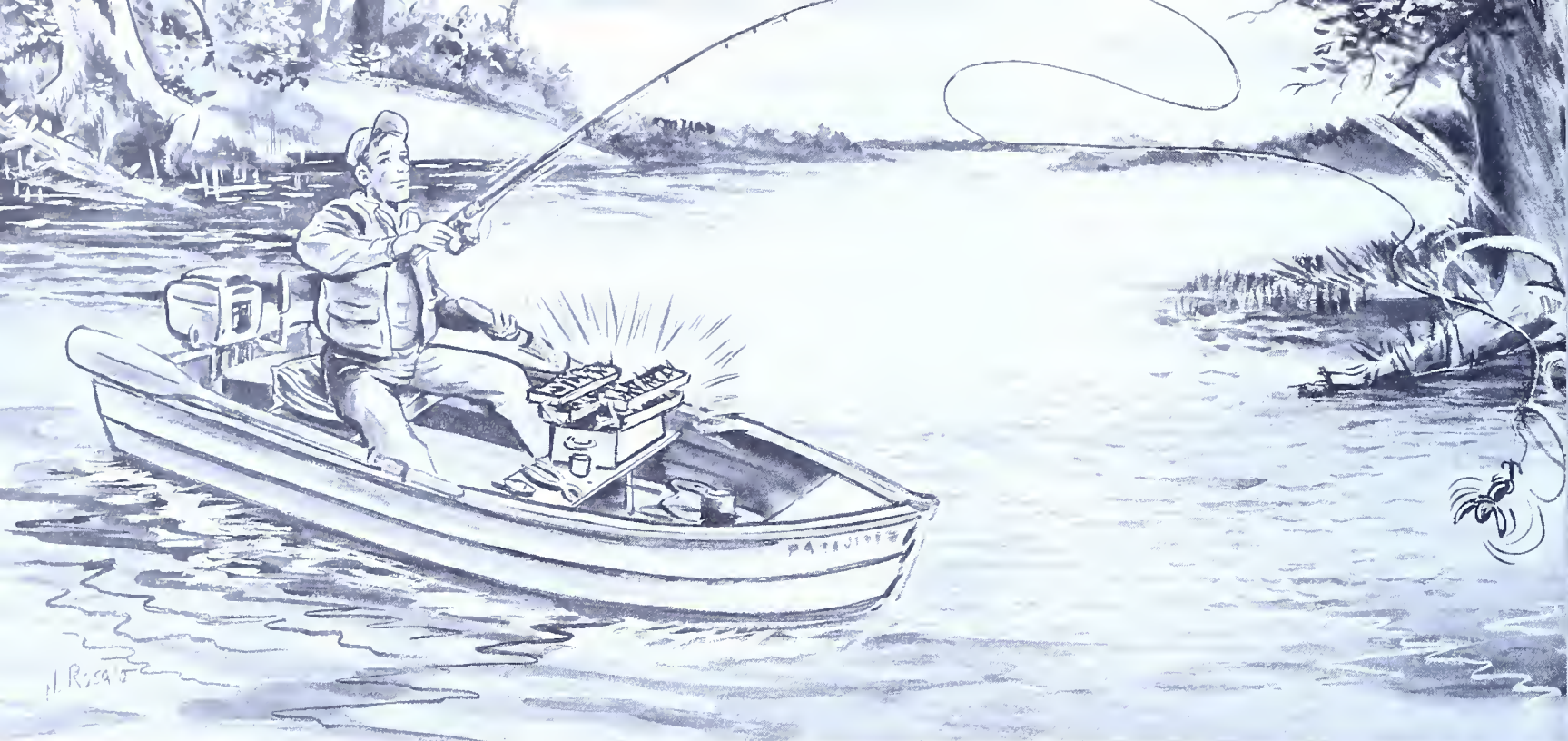
The companionship of his "old man."

Games are outgrown and toys decay,

But he'll never forget

If you give him a day!

Author unknown



LUCK & LURES

by George E. Dolnack, Jr.

The right combination is certainly responsible for successful fishing. But for consistently productive fishing, knowing which lure to use, and when and how to use it, will greatly enhance your "Luck"!

"Fishing lures," like guns, is a much discussed subject and all fishermen have their favorites for one reason or another. Usually, a fisherman will attribute his success to the particular lure he is using and his envious friends will ascribe his good fortune to "luck". The hunter or shooter who consistently scores, hunting savvy being equal, is one who is intimately familiar with his gun. Likewise, the fisherman who consistently catches fish owes much of his success to familiarity with his lures.

Most fishermen have a tackle box full of lures and more stuffed away in an old cigar box that's collecting dust on some forgotten shelf. Some of these lures were found but most of them were bought. And there are many reasons why a fisherman buys a lure.

He's come by them from a hot tip from a fellow angler or maybe he was impressed by the rave notices given the lure in an advertisement that only fishermen read . . . fish don't. Or perhaps he just liked the looks of it and thought it would look good to a fish too. Then maybe the last lure he bought didn't produce, so he'll try a new one. But imagine the disappointment and frustration when nothing takes the new one after using it a couple of times.

Anyway, this goes on until he has acquired a tackle box full of mighty impressive hardware that fools everyone except the fish. Because, despite this vast array of wood, metal, plastic, feathers, fur, beads and

various other bits of deception, there are only a few that are used with much success.

And the rest of them? Well, some of them probably have more action in the air, on their way to water, than in the water where they're supposed to do the most good, and the remainder never seem to get used.

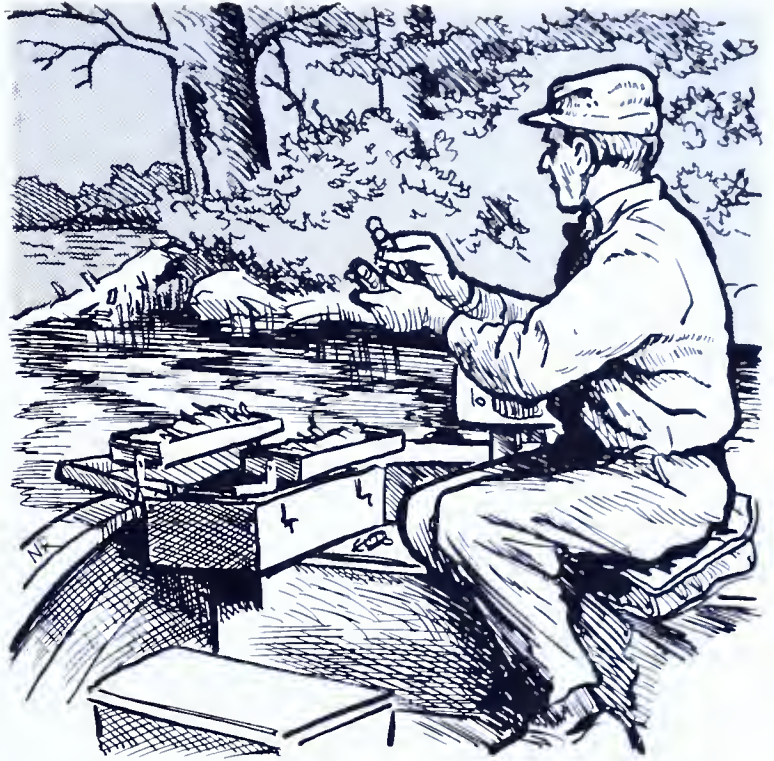
Now maybe I, for one, don't know how to cast these lures and maybe they're just not balanced like they should be to permit proper and accurate casting. And too, just maybe the feathers, fur and other stuff attached to some of them create enough resistance while in flight during the cast to cause them to travel off kilter and land in the water either fouled or in a non-retrieving position.

What does a fisherman do when the lure he is using doesn't produce the desired results? The first thing he's likely to do is to mumble selected unmentionables under his breath and then try another lure. When this one doesn't produce, he'll likely continue the process until he's tried just about every lure in his inventory. And during this time he may well have spent just as much time changing lures as fishing. Then, when he goes home, he will invariably blame his empty creel or stringer on a lack of fish or use the old saw "they're not biting."

And there are times when fish just won't bite, turning their noses up at everything. There are also exceptions, for some fishermen can almost always come up with a lure out of the depths of their tackle box and take fish when others are not. Sad to say, I'm not one of these Waltons.

I'm not advocating that any one lure is better than another, but as the old saying goes, "What is one man's cup of tea, is another man's poison."

For example, I know a fisherman who uses a C.P. Swing for walleyes and is highly successful with it.



Another friend uses the same lure for trout and fills his creel regularly. As much as I have tried, I have never been very *lucky* (there's that word again!) with this particular lure. But I have caught my share of walleye on almost any combination of black/yellow three-eighths ounce jig and a lot of trout on a Panther Martin 2PMR with a red, yellow spotted body and dark spinner blade. As a matter of fact, I've caught northern, bass, perch and even two catfish on that same jig.

Someone once said that some lures are made for the fish and others for the fishermen. Maybe so because they come guaranteed to catch fish by sound, color, action, fur and feather. Just look at these alluring claims laid to some lures and you'll be inclined to think that there is more truth than fable in that statement.

"Catch fish all summer long.", "Fish can't resist this lure.", "Drives fish crazy.", "Fantastic results." "Most effective.", "Deadly at rest or in water.", "Wiggly, wobble action.", "Beautiful.", "Fabulous sonic effect." "Irresistable.", "The big ones go for this.", "A sensational built-in 3D flash.", "The new bait with the killer instinct."

Makes you want to run out and buy a couple of each, doesn't it? But the big question is, will these lures catch fish. And the answer? Sure, most of them will, if they are used properly. And therein lies the crux of the problem, because a lot of good lures fail to take fish simply because the fisherman doesn't know how to use them and won't take the time to learn.

True, every now and again a lure comes along that is highly successful for a lot of fishermen and becomes immensely popular almost overnight. Perhaps

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*That April opener is months away—why wait?
Try taking those wary trout now!*

"SNOW FLIES"

by Keith C. Schuyler

Across the face of this state are those who aren't interested in trout fishing unless they can cast flies over and into a stream.

It is now no longer necessary for them to sit and fret while others enjoy themselves jigging through a hole in the ice or go chasing other fish in warmer climes. Pennsylvania has year-around stream fishing for trout.

Although I was aware of the fact, it was not until Barry Beck enticed me into a frigid trip to the Little Lehigh below Allentown that I really appreciated what is offered in winter trout fishing. Barry is one of the dyed-in-the-feathers fishermen who isn't happy unless he is on the trail of a trout. Consequently, he has built up quite a following of patient and long-suffering fishermen who accompany him on his winter sojourns. Although otherwise normal, he will break ice from his guides, clean snow from his polaroid glasses and try to thread a 7X tippet through a No. 28 hook for the pleasurable possibility of coaxing a trout from under the ice edge on open water.

He is not alone. Cognizant of the winter malady which affects certain trout fishermen, the Pennsylvania Fish Commission has established eleven "Fish-For-Fun" projects, (and one "Modified Fish-For-Fun") on a year-around basis across the state. The Little Lehigh River below Allen-

town in Lehigh County, where we have dodged ice cakes and snowflakes to fish, used to be the only trout stream open twelve months out of the year, but today's listing (see next page) reveals some very challenging water areas scattered across the Commonwealth. Although not subject to regular "Fish-For-Fun" regulations" another area where trout fishing is permitted on this year 'round basis is the tail water of Youghioghenny Dam.

Since only feathered lures and their like are permitted in these eleven year-around "Fish-For-Fun" areas, the comment from the average angler might be, "So what?!" The answer here is, "So you can still enjoy top trout fishing at any time if you have the know-how, the stamina, and the patience, necessary."

It is true that there are many days throughout the winter on which it is tough going. In addition, those wishing to pursue their snow flake stream fishing may find that high-way conditions are not conducive to long trips. With the limited number of such areas available, it means that most must travel some distance to their fishing. Nevertheless, when expert anglers like Beck can catch as many as 35 trout in one day, and never get *skunked*—there must be something special to his winter trout fishing!

The secret, if there is one, is in



going properly prepared for the special conditions which such fishing presents. Not only will trout take underwater offerings readily throughout the winter, there are occasions when they will come to the surface for the minute insects which are available on the warmer days.

My extra-curricular trout contacts have been confined chiefly to the Little Lehigh, the Yellow Breeches, and Fisherman's Paradise on Spring Creek, although I have hit the North Fork at Brookville and Youghioghenny on occasion. But, I have seen some of the more expert such as Vince Marinaro and Jim Bashline taking trout when others went begging. And, some of the finest demonstrations have been put on by such as Barry Beck.

One thing of which you can be certain, is that those who are taking trout regularly will usually be using nothing but the finest in tackle and lures. The tiniest of nymphs, from No. 20 down to No. 28 are frequently required to elicit interest from the trout. Imitation midge larvae in creams and grays are among the more likely to produce action. Very

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FISH-FOR-FUN PROJECTS—1973

Locations

	County	Stream	Mileage	Location
Regulations on these areas are generally the same as for fly-fishing except: 1. No trout may be killed or had in possession except one (1) trophy trout per day 20 inches in length or longer may be taken on all projects except "Fisherman's Paradise" (Spring Creek, Centre County). 2. Open to fishing the year around (no closed season). 3. Fishing hours 5 a.m. to 9 p.m., E.S.T., or as posted. 4. No wading permitted (except in Yellow Breeches Creek) except at designated cross-overs or as posted.	Centre	Spring Creek (Fisherman's Paradise)	.6	Lower boundary of Spring Creek Hatchery grounds to the upper boundary of the Paradise. (No fish may be killed or had in possession).
	Cumberland	Big Spring Creek	.9	From the old Thomas Dam to the Strohm Dam.
	Cumberland	Letort Spring Run	1.5	From the bridge on Township Rt. 481 downstream to the Reading Railroad Bridge at the Southern edge of LeTort Spring Park.
	Cumberland	Yellow Breeches Creek	1	From Boiling Springs downstream to vicinity of Allenberry. (Wading permitted.)
	Elk	West Branch Clarion River	.5	Beginning at the intersection of U.S. Route 219 and Route 24007 upstream along Route 219 to the Texas Gulf Sulphur property line. Fishing permitted from east shore only.
	Franklin	Falling Spring Branch	.75	From the bridge on L.R. 28003 in the village of Aqua, downstream approximately 300 yards below the bridge on T319 to the property line of Leonard Zeger and Valley Quarries.
	Jefferson	North Fork of Red Bank Creek	2	From U.S. Route 322 in borough of Brookville upstream a distance of two miles.
	Lehigh	Little Lehigh River	.5	Price's Bridge to a point south of the Hatchery Road Bridge.
	McKean	Marvin Creek	.9	From proximity of high voltage line (3 miles south of Smethport) downstream 0.9 miles.
	Mercer	Neshannock Creek	1	From bridge at Route 258 upstream to bridge at Route 58.
	Potter	Kettle Creek	1.7	Beginning approximately 500 feet below the first bridge where Rt. 144 crosses Kettle Creek northeast of Cross Fork and extending upstream 1.7 miles.

Modified Fish-for-Fun Project

Standard "fish-for-fun" regulations in effect except that spinning lures are allowed and wading is permitted.

Warren	West Branch of Caldwell Creek	2.5	From West Branch Bridge upstream to Three Bridge Run.
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One man's solution to the litter problem

My Garbage — by numbers

by George L. Harting

The youth meeting was called to discuss ecology and featured addresses by a husband and wife team of scientists; both tirelessly dedicated to working for a better environment. After the gentleman finished his presentation of scientific arguments dealing with the staggering toll of pollution, his wife took the floor. She zeroed in on our American habit of prolific littering.

The teen-agers listened intently as she caustically detailed a whole gamut of non-returnables which end up, so often, as litter along our highways and parks; even, she explained, the remote wilderness areas are not immune from the inroads of the litterbug.

I became annoyed when she put plastic products on the list of nuisance items. Registering my protest, I explained that plastic baggies, for example, were ideal for transporting my day's catch of cleaned brook trout. Furthermore, who wants to wash sticky egg pans when you're camping? Why not dispose of them?

Her reference to littering, however, brought to mind my recent boat ride down the Jordan Creek and the disgrace of its littered banks. The 50-year accumulation of rotting, rusting, stinking debris dumped there mars the potential beauty of this stream. The tragic practice of making a community dumping area in a wooded gully, a sort of no man's

land, had created a real eye-sore. As the refuse piled higher, it gravitated nearer the stream banks; winter thaws and summer showers, swelling the stream, accounted for the spreading litter—refrigerators, cans, tires, carcasses, you name it, over the five-mile area of the stream's flow.

But this discussion about littering brought to mind yet another exposure, a very embarrassing one at that. I recalled fishing my favorite trout stream one early Monday morning when a stern voice attracted my attention. "They burn you out, steal, scatter their junk all over the place." Looking in the direction from which the voice came, I saw my very generous host sharing his weekend trauma with his neighbor.

At the time I was fishing a favorite eddy below the farmer's bridge where an acceptable brownie grabbed my minnow as it passed his special rock. He headed for the current and my singing line cut through a surface debris of eddying grass and driftwood, littered with plastic containers and a floating quart size soda bottle. I set the hook and then contemplated the serious impact of the farmer's final words to his neighbor as they headed for the barn: "I'm just going to have to close the place to fishermen." I could experience only sympathy for him, however, as I considered his charred hay field, the result of a careless smoker, his littered stream banks, and his empty farm

pond, fished clean of privately stocked brookies by night poachers.

The sobering impact of the littered Jordan Creek and the prospects of my favorite trout stream being closed became sufficient reason to pay sympathetic attention to this lecture on littering and its alternatives. The speaker had now reached that point in her address where she offered a solution for my baggies and throw away pans. "Recycle them," she suggested. I respected that idea; for many years I have felt that America is a scandalously wasteful country. I approved of her idea, on the basis of conservation alone, without even relating it to ecology and environmental quality.

The objectives of the meeting were achieved, for in addition to inspiring our young folks toward a more beautiful America, the speakers awoke in my mind an idea for the disposal of my solid garbage. I evaluated an idea by which I would label my waste cans by numbers: one for aluminum, another for plastics, another for metal cans, one for bottles, etc. In this manner, I could collect my garbage in homogenous groupings making it possible, and profitable, when enough people would follow suit, to collect the items for recycling. Of course, not being a scientist or an engineer, I am not competent to make a proper analysis of the waste I sort. To help me at this point, the concerned manufacturer of packaging products could stamp directly on the can, box, or bottle, the suitable directions for the recycling disposal process. I would expect that many customers who are ecologically minded would favor the purpose of such products where cooperation is volunteered. Efforts could be made to nationalize these directives on a standard system so that aluminum products, for example,



would carry the same disposal directives in any part of the country.

I am employed by a non-profit organization that sponsors a camping area. A Boy Scout leader was negotiating an agreement for its use; the group he represented was a sizable one. He concluded the arrangements with the guarantee that when they left we would scarcely be able to see that the area had been in use. That's a challenge that ought to motivate every sportsman who inhabits "America The Beautiful." It ought to say something to each of us about finding logical ways to control the tons of litter that we produce each day.

During the early forties a small town dumping area, the eyesore of the community for many years, was suddenly cleared away. The rusting tin cans, it was reported, were salvaged for the manufacture of war material. Why should this not continue to happen to the innumerable dumps that exist across our land? Can it be that we are motivated with finer loyalty toward fighting wars than toward achieving a wholesome environment?

I have no doubt that the idea of numbered garbage cans will be rejected by many readers; their revolt may be on the basis of prejudice, laziness, inconvenience, and, undoubtedly, the impractical and unscientific aspects involved. At any rate, I would like to try it; I submit it as a likely solution so that in the future littering may be curbed and floating soda bottles won't disrupt a striking brownie and anger my kind and generous host who has allowed me to fish his property for many years. More specifically, a technique such as this that promotes the recycling process would go a long way toward keeping America beautiful.



KEYSTONE CAMPING

by Thad Bukowski

Taking Up Camping

Some years ago, I sat on the edge of a bed and spread out a brochure which advertised all the fun folks were going to have at a "Vacation Convention" to which I was invited. Almost instantly I bemoaned the fact that the *others* would have a whale of a time because I was sure I couldn't go.

I made a decision a few moments later, however, to go anyway, come what may! A camper for our family of five was the answer. Colorado was the scene of the convention activity, with camping in the hills when convention activity was over.

About Christmastime, the first of a number of Sports Shows was staged in the community. My eye caught a canvas-sided, pale-yellow, convertible camper with hardtop, and I corralled it for an \$850.00 figure. That summer, we toured the Rockies with the outfit, and subsequently hit Pennsylvania's Pymatuning, the Allegheny National Forest, in a number of places, various state parks, and a few private places. We went on to Saskatchewan, Ontario and Florida in the next few years before we graduated to an 18½ foot travel-trailer. With it, we continued camping across much of the state, on to Idaho and Wyoming and at last count have

logged across 33 states and three Canadian provinces.

In reflection, these camping years have been full of fishing and boating fun, and wide-eyed nature exploration. Strangely, the budget for camping differs little from remaining at home.

It takes no particular special mechanical skill to camp. But advice from experienced campers is most useful, should you take the plunge and buy yourself an outfit as a Christmas present. Additionally, almost any local community of any size has its camping club which can be an invaluable source of helpful information on procedures and places to go and how to begin.

If you have had camping on your mind, public parks (whether federal or state) have expanded and updated their facilities tremendously, so that enjoyable experiences of a wider variety are much more available than they were even five years ago. Private camping grounds have also kept pace and are topnotch in many cases.

Most everywhere, young families are often involved in camping and their youngsters grow up getting an early share of knowledge of the outdoors. Don't wait until the kids grow up to take it up, because their interest wanes when they become teenagers. Our most enjoyable camping

Many families begin camping with a canvas sided camper, but campgrounds throughout the state still find tenters in great numbers. Most important is that a young family start camping when the youngsters are eager-eyed for adventure.



experiences occurred when the *young-fry* were in the elementary grades, wide-eyed and eager for every new adventure.

Every camper has a reason why he chooses his type of equipment. Some are real nature buffs who still want to stay with the tent, and do so, reliving conditions as they existed for adventurers long ago. These stalwarts can readily pack their meager equipment and get into places where big trailers cannot go. Those who pick canvas-sided campers have light rigs which fit the average family budget well and also trail easily.

A common procedure is to graduate to the travel-trailer from the camper when the family finances permit it. Travel-trailers satisfy the camper with many more conveniences; most everything can remain in the trailer for the duration of the camping season. Only the refrigerator needs to be repacked for every new trip.

Some folks go for truck campers and they're particularly convenient when one wants to tow a big boat along on his trips. But both truck camper and the most elite of the camping group, those who travel in mobile homes, are thwarted somewhat in that each has to use his camping vehicle for "side trips" in and around the camping area. Other campers even convert busses to take them afar. Whatever way one camps, it is a healthful endeavor. This might be noted by the amount of enjoyment campers have with bicycling and horseback riding, added as recent common camping enjoyments to the usual motor-boating, sailing, fishing, swimming and nature hiking. But a great many still enjoy the campfire, swapping tall tales late into the night.

If you do buy your rig, always have an auto in top performing order, adequately tired. We have gone to six-plys for our auto to pull our 3,400 pound travel-trailer and never regret it, particularly when going through a half-hour by-pass at 60 per on some busy highway. If you get a heavier rig, also get a "trailer package" for the auto you'll pull it with. And by all means, add stabilizers to your hitch if they're needed.

If you already have the camping setup you need, then the Christmas season may be used to add a canoe; a good AM-FM radio, both electric and battery; a small motor for that canoe, a propane lantern, steel cutlery for the camper, or even a camera.

THE ANGLER'S NOTEBOOK



by Richard F. Williamson

Now is the time of the year to apply new coats of paint to casting lures and to polish and lubricate spinners and other lures with moving metal parts that may become rusty.

In trolling, move a lure just fast enough to bring out the action built into it and to keep it from snagging on the bottom. Lures that move slowly and go deep catch the most fish.

Store trout flies carefully for next season. Wash them by swishing them in clear water, and steam dry flies to restore their fluffiness. Then put them in a closed container in which a moth repellent has been sprinkled.

If the rod tip loosens while it is being used, heat it with a match and then press it back into place. The tip cement will melt when heated. When it cools it will hold the tip in place until permanent repairs can be made.

Hooks are the cheapest of all fishing tackle, and even the best cost comparatively little. Buy and use only the best.

You can enjoy winter. When the weather permits, take a hike along a favorite fishing stream. Carefully study the pools and riffles and obvious hiding places for fish. This will help you select spots that will be the most productive in the spring and summer.

A snagged hook calls for a careful examination of its points. See that it has not been bent out of position, dulled, or even broken off. Usually it can be bent back into position, but if it is damaged beyond repair or broken off, a new hook is obviously necessary.

Large trout like big mouthfuls of food. This is why they so often ignore artificial flies but strike readily at minnows, grasshoppers, and worms.

Catfish are light biters. A big heavy rod will not "telegraph" the strike readily to the angler.

A bit of pork rind attached to a spoon or jig will improve its action.

The only leaders that are worth saving over the winter are ones that have not been used.

Minnows about three inches long are ideal bait for walleyed pike. Walleyes also take worms, but not small ones. Use night-crawlers.

Don't bunch a worm on a hook. Rather, put the hook through the body about half an inch from the head, and let the rest of the worm dangle and wriggle in the water. Also, use the lightest possible hook in worm fishing to give the impaled worm the greatest possible freedom.

Short wire traces are essential in fishing for sharp-tooth members of the pike family. A monofilament line is easily sawed off on the teeth.

Try a worm harness in fishing for reluctant bass. The harness consists of three hooks attached to a heavy monofilament section, with one or two spinners at the head. The night-crawler is attached to the three hooks so that it extends its full length. Cast the lure, allow it to sink to the bottom, then retrieve it very slowly, making the worm appear to crawl along the bottom.

HURRICANE AGNES DIDN'T STOP THESE ANGLERS!

Last June, the raging waters of the Susquehanna climbed the banks, covered Routes 11 & 15, and continued up to the second floor of many residences in Wormleysburg, across the river from Harrisburg. The Dimoff family of 350 N. 2nd Street chose not to evacuate and young Mike, right, spent the night fish-

ing from the porch roof. The next day, as the waters began to recede, Photographer Stence Miller snapped a picture of Mike with his fifth catch, a 20" carp; swapped camera for fishing rod and tried his luck, below, in his own front yard. His score? "0"!



FLY TYING

by Chauncey K. Lively

photos by the author

THE

"POLABOU"—Mini-streamer for "flea" rods

The early season is often a frustrating time for the fly fisher. Swollen streams laden with cold murky water from melting snow and spring rains are the norm of mid-April, particularly in the mountains, and when conditions seem hopeless the angler plies his fly more with blind hope than with positive expectation. When Spring appears to be Winter insatiated, his casting eventually becomes mechanical and his attention is diverted to the display of early wildflowers along the stream banks, sure promise of the better days to come. But there can be some fly fishing, too, if the angler is willing to leave the throng and hike up the tiny tributaries, gambling that there he will find clearer water and resident brook trout, though small they may be.

Early season fishing is not, I must confess, my favorite brand of angling; yet I wouldn't miss it for the world. For quite a few years now, my wife and I have spent much of our fishing time in early Spring tramping along the mountain rivulets and dividing our attention between angling and photographing wildflowers. Last year, along a sparkling tributary, the Spring Beauties were so profuse on the narrow valley floor that we resorted to wading the little stream to avoid trampling them. Once we

hiked to the top of a mountain where we found a beautiful subminiature of a stream—tributary of a tributary, glass-clear and icy-cold—and we followed it for quite a distance until we reached a high, spuming cascade, beyond which passage was impossible. As nearly as we could determine the little streamlet was sterile of fish and other aquatic life. But on our downstream hike we came upon a Showy Orchid in all her queenly splendor of full bloom, a rare gem for that region. 'Tis true there's more to fishing than the mere catching of fish. Nevertheless, the catching of trout plays an important part in our excursions into the wilderness.

The brushy, overhung character of the little tributaries dictates the use of short fly rods, many of which are around six feet in length and under two ounces in weight. With water temperatures often colder than forty degrees the native brookies seem to respond best to a well-fished streamer fly; but the problem with most early season streamers lies in their size and heaviness, making them unpleasant to cast with a tiny rod requiring a 4-weight line. For this type of work we have been using with great success a little streamer fly we call the Polabou.

The Polabou is tied on a size #12

or #10 hook of regular shank length and overall, the streamer is 1" to 1¼" long. The wing is a mixture of Polar bear hair and white marabou fibres, hence the fly's name. The two wing materials complement each other: the marabou fibres provide the characteristic slithery action in the water while the Polar bear hair furnishes a brilliant sheen which is lacking in marabou alone. A tail of scarlet hackle fibres is spread flat against the underside of the wing to offer color contrast and the body, wound of fine copper wire, adds flash and just enough weight to take the fly under. It's a pleasant streamer fly to use with the little rods and it has produced well and often in the tributaries when the mainstreams were too high or too crowded to suit us.

Size of fish is relative to their environment and to the tackle used. An eight-inch native from a little, basin-like pool, taken with a featherweight rod, can give delightful play. And in coloration the little brookies match the brilliance of the wildflowers. My best tributary native last season was a 10½ inch male, dark-backed and red-bellied, with fins of deep crimson edged in black and white. He still lives in that laurel-lined pool and I hope he is the progenitor of many more like him.



TYING THE POLABOU



◀ 1. Hook is size #12 or #10, regular length and weight. Tie in black* Nymo thread at bend. (* Available from Regis J. Schultz, 1223 McNeilly Ave., Pittsburgh, Pa. 15216.)

2. For tail, bind a generous number of ▶ scarlet hackle fibres to hook at bend. Make a turn of thread under base of tail to flare it upwards and spread fibres.



◀ 3. Tie in a 5" length of fine copper wire at base of tail and spiral thread forward over butts of hackle fibres and half-hitch about 1/8" behind eye of hook.

4. For body, spiral wire forward in close ▶ winds and tie off with three firm turns of thread. Half-hitch. Trim or break off excess wire. Apply a coating of clear lacquer to wire body for prevention from tarnishing.



◀ 5. Cut a bunch of natural Polar bear hair from the hide and match with an equal bunch of white marabou fibres. Place the two bunches together and roll between thumb and forefinger to mix the two materials.

6. Bearing in mind that the wing should ▶ be about twice the length of the hook, grasp the butt end of the wing with the left hand and hold it about 1/4" above the hook at fore end of body. Bring thread upward and make a complete turn around wing, then pass thread under hook from far side. Lower wing until it is flush with top of hook and pull thread tight. Without releasing left hand grip, make two more turns of thread around wing and hook. Half-hitch.



◀ 7. Trim wing butts on a bevel and saturate butts with head lacquer.

8. Carefully build a neat head with ▶ thread, whip-finish and cut off excess thread. A coating of lacquer on the head completes the POLABOU.





ALONG THE ALLEGHENY

SWP Greiner and E.P. S. Dan Hudson were working the Pollution Patrol Boat on the Allegheny River near the mouth of Squaw Run, when a fisherman on shore held up a small large-mouth bass when asked if they were catching anything. SWP Greiner told him it was a nice fish and that he would like to come ashore and look at it. The fisherman must have known that the fish was illegal, as he told SWP Greiner to go where all good "Fish Wardens" go, threw the bass at the patrol boat and ran up the bank and disappeared.

Gerald T. Crayton
WWP (N. Allegheny Co.)

FIRST TIME—

After almost seventeen years in Wyoming County I accomplished several firsts last June.

Ran my boat OVER the bridge on Route 92, No it was not *on the boat trailer*;

sheared a pin on a guard rail on Route 92;

launched my boat on the main street in Meshoppen;

launched my boat from Tioga and Bridge Streets in Tunkhannock

Ran my boat *through* the Car Wash in Tunkhannock!

Stephen A. Shabbick
WWP (Wyoming Co.)

SMART BROWNIE!

Mr. Guy Howlette who works for the Highway Department in Cameron County related to me that he saw a large brown trout cross the highway and go into the pond at the Emporium County Club. Mr. Howlette was watching flood conditions last June on Route 120 in that vicinity and the water across the roadway was shallow. This old trout, about 20", long knew where to go when the going got rough.

Stanley G. Hastings
WWP (Cameron Co.)

BOAT-FLOAT STOCKING

The Emporium Jay-Cee's have in the past float stocked the Driftwood Branch by walking along the shore with the float boxes. This past spring

I loaned my boat to them and they strapped it to the boxes, one on each side, and they were amazed at the ease with which this float-stocking was done. They planted about 2500 trout in 7 miles of inaccessible waters much easier than in past years. I have had many compliments on this fine stocking and I thank them for the great job they've done.

Stanley G. Hastings
WWP (Cameron County)

DEPUTIES AT WORK!

I attended the Cleveland sport show for the first time this year and was very much impressed with the Non-Resident fishermen from the state of Ohio who fish in Pennsylvania each year! These fishermen helped to make Mercer County the number one county in the sale on Non-Resident fishing licenses.

The Deputies of Mercer County have given long hours and many many miles of driving to further good relations between the sportsmen and the Pennsylvania Fish Commission. The deputies of Mercer County sold nearly 500 "years" of good reading in our PENNSYLVANIA ANGLER sales competition! They have acted as my right arm in many cases and I would like to say THANKS to them (and their wives) for the many hours they have spent for the betterment of fishing Pennsylvania. Just think—they have served this time at their own expense.

James Ansell
WWP (Mercer/N. Lawrence Counties)

CRUSADERS!

On the 29th of April the Boy Scouts with their leaders did a wonderful job in cleaning up the Evitt's Creek Watershed for about ten miles!

Mr. Alvin Markey is a young man who takes a walk of between three and five miles almost every day, summer and winter, mostly in the Morris-on-Cove area. During the years 1967, 1968 and 1969 this young man gathered up 10,363 soft drink bottles—ones that could be redeemed. His 1970 and 1971 record I have not received as of this date. I am not

counting other bottles that Mr. Markey gathered up and buried! Some of the area is along one of our best trout streams and most of this was thrown from cars—not by fishermen and hunters. On several occasions I have heard Mr. Markey called Pop Bottle Aley. Mr. Markey just laughs. This count of bottles is not a guess, it is an accurate count. Some of the things he gathers up and buries I will not mention. If only we had more people like Mr. Markey!

William E. McIlroy
WWP (Bedford County)

WADING NOTE:

During a fishing outing on August 29, 1972 at the Tailwaters of the Kinzua Dam, two fishermen waded out to a gravel bar located near the middle of the river. At approximately 9:15 AM the gravel on which they were standing gave way. Both fishermen fell into the current of the tailwaters. Louis D'Ambrosia, 228 Columbia Ave., Pittsburgh, swam to shore. Roger Siek of Canonsburg, age 33, succumbed to the water, after an unsuccessful attempt to save him by Albert Bevilacqua, an employee of the Fish and Wildlife Service. The victim's body was recovered by rescue units from Warren and Clarendon at 11:05 AM.

Paul R. Sowers
WWP (E. Warren Co.)

GOING BATTY!

Bob Yonkers, an ardent fly fisherman from Wilcox, Pa., was fishing the Fish For Fun area of the West Branch Clarion River and doing very good until he started to catch "bats." In a short time he caught four bats on his fly and finally gave up for the evening.

Bernard Ambrose
WWP (Elk Co.)

MUSKIES GALORE—

Dan Gartside, from Chambersburg, called my home one evening to inquire about musky fishing in the Huntington County area. I talked with Mr. Gartside and suggested I meet with him to point out some of the known "hot spots." As a result of the meeting, three trips to the river netted him a total of five legal muskys. All fish were released, except the largest, which measured 41 inches!

It is a rare individual who is willing to invest the long hours necessary to land a legal musky, and an even

rarer individual who can recognize that the true sport is in the *catching* and not in the killing.

I commend you Mr. Gartside, for you are a true sportsman and a gentleman. We need more fishermen of your caliber within our ranks.

James T. Valentine
WWP (Huntingdon Co.)

BELTZVILLE'S BOOMING!

Beltzville Lake, opened to boating on April 15 for the fishermen, dedicated on May 27, 1972 as a State Park, really afforded recreation etc. this year to Pennsylvania residents as well as out of State people. Boats bearing registration from at least 15 other states, as far west as California, as far south as Florida and Mississippi, and as far north as Michigan and Maine were observed using the lake. Although we had heard rumors of legal size musky all summer, the first muskellunge verified and measured as legal were checked since September 2, and at least a half dozen have been verified by FC personnel. This all the more remarkable since the Tiger muskellunge was first planted in the lake as fry on May 17, 1971.

Fred Ohlson
WWP (Carbon Co.)

THIS ONE DIDN'T!

The "Big One That Got Away" is an old story and we are seldom offered any proof of the size of that lunker that broke someone's line. SWP Stanley Long was offered proof, however, as he was checking fishermen in the Fish For Fun area on the Little Lehigh Creek. Dr. Smith, a dentist in Allentown, was fishing the area and was telling Officer Long all about the gigantic brown trout he had lost the day before. As he was talking he hooked a fish, looked down, fastened his eyes on one of the biggest trout in the entire county, exclaiming, "I got him again!" He had him all right, and after a tricky battle, he had the brownie on the shore just as the hook fell from its jaws! Dr. Smith finally captured the "One That Got Away," a 26½ inch brown trout weighing over five pounds!

Fred Mussel
WWP (Lehigh Co.)

MOTHER NATURE AGAIN—

In talking to Ross Huhn he informed me that when the Fish Commission Biologists surveyed Mountain Creek for trout stockings, the finding at that time was that the creek was

too warm for brook trout—it would have to be stocked with brown trout. He said that problem might have been solved though, as the high waters from Hurricane Agnes deposited a refrigerator in every hole along the creek! I always heard Nature has a way of taking care of Herself. There you are!

James R. Beatty
WWP (Fayette Co.)

READ IT AND WEEP

During the past week I found a dead musky along the banks of the Allegheny River. The fish measured 48¾ inches. In its throat there was a large jointed plug which undoubtedly caused its death. Attached to the plug was a short length of monofilament line which couldn't have been any heavier than four pound test. Here was a beautiful trophy lost due, at least in part, to negligence. Why would anyone fish with a six inch plug, and use four pound line?

George Jones
WWP (Warren Co.)

PLENTY OF HELP—

Kettle Creek Sportsmen Club is continuing the stream improvement project on the Fly Section of Cross Fork Creek. Three weekends will be devoted to this project and some excellent work is being done. A very good turnout of help this past weekend produced some outstanding work. Some traveled as far away as New Jersey and Ohio to help with this project. Much credit goes to Jim Anderson, Cross Fork, Pa. for taking this load on his shoulders to make it a success.

Kenneth Aley
WWP (Potter Co.)

THE HORSE HAD A LICENSE?

The following story was related to me by Gary Leach, District Forester, Indiana County. While attempting to seine minnows in a stream on his farm, Gary would stir up some mud, then go downstream and seine minnows. After several attempts at this with very little success, due to the muddy water beating Gary downstream, he was about to give up. During this time, Gary's pet horse was standing by the stream, watching the minnow seining exhibition. Upon seeing Gary stomping in the stream the horse jumped in the stream and tramped around stirring up enough mud that Gary got all the minnows he wanted. Now if only the horse

could show Gary how to catch a fish on the minnows all would be fine.

Allen G. Stiffler
WWP (Indiana Co.)

STATE "RAT PATROL"!

While on boat patrol on the Allegheny River in the city of Pittsburgh, SWP's Kopta and Englert were sitting out a sudden cloudburst under one of the bridges when a youngster called to them and asked if they were members of the "Rat Patrol." SWP Kopta told the youngster that he was watching too much TV! But the boy was serious, as the State *does* employ persons for Rodent Control in Pittsburgh. The youngster told SWP Kopta that he knew someone that worked for them and that they wear a keystone shaped patch also!

Gerald T. Crayton
WWP (N. Allegheny Co.)

REAL FISH "TAIL"—

A certain Chester County angler related this tale while fishing after dark one night on Slate Run. He caught a fish which gave him such a hard time he felt it had to be a trophy catch. He even had a picture in his mind of just how good it would look mounted on his wall. Much to his surprise, when he finally landed it, he had foul-hooked it by the tail! Sad ending to what should have ended as a happy "Tale." Maybe the next time Tom!

James H. Lauer
WWP (Lycoming Co.)

YOU WON'T BELIEVE THIS!

An interesting group of fishermen folk in my district is the "Senior Citizens of Bowman's Hill" These people, retired ladies and gentlemen from Philadelphia and Bucks County, spend many, many hours fishing in the Delaware River and Canal. *Between bites they play bridge.* Their quarry? You guessed it, the CARP!

Jay Johnston
WWP (Bucks Co.)

FLAVORED BAIT?

During routine patrol of Racoon Creek State Park Lake, I met a little girl and her brother fishing very intently. I asked the girl if she was catching any fish and she replied, "No." Noticing a bag of pretzels nearby, I jokingly asked, "Are you using pretzels for bait?" Again she uttered, "No." With a devilish smile. To this her brother added, "I'm using grapes!"

Donald Parrish
WWP (Beaver Co.)

BOATING

Questions & Answers

by Capt. Jack Ross

From C. W. U., Wexford:

"In a pinch, would it be all right to use leaded gasoline and regular motor oil in my 7 hp. outboard called an Esko?"

—Your engine will burn leaded or white gas equally well, as will most modern engines. However, there are some older outboards which should not be run on leaded gas, and some late models which may be harmed by white gas. Best bet is to check the owner's manual or ask the dealer. As for oil, engines like yours designed for a 24:1 mix can be used with motor oil in a pinch, but I would not recommend this for engines designed to take a 50:1 gas/oil ratio. The thinner mixture needs all the help it can get from the special additives in outboard oil.



From D. R. S., Union City:

"I recently acquired a small Firestone outboard motor, serial number W 463 60111; could you tell me who made it and when, whether parts are still available, and the horsepower? P.S. The motor runs fine on my 12-foot fishing boat."

—If that engine is still performing well, it must have had good care over the years, since it was built in 1946 by Scott-Atwater. The horsepower is 3.5, and most parts, other than housings and complete blocks, are still available.



From J. L., Mt. Carmel:

"My outboard makes a lot of smoke and the plug keeps fouling, although I have cut the oil mix down to eight ounces per gallon. What do you suggest?"

—Cut down some more, to five ounces per gallon, which is the correct mix for your engine, 24:1.



From J. R. S., State College:

"Reader R.T.M. from Kittanning

must have wondered how that last five gallons disappeared so fast (See Boating Questions & Answers, September 1972 Angler). The figures you gave for depth in a cylindrical tank vs. percentage of volume were reversed."

—Thanks to our sharp-eyed mathematician for the correction. We goofed in transferring the calculations from our work sheets to the copy for this column, and compounded the error by using the backward percentages to mark off the dipstick. With apologies to R.T.M. and a tip of the captain's hat to J.R.S., we herewith present the correct table:

For Cylindrical Tanks

% of Depth	% of Volume
16	10
25	20
34	30
42	40
50	50
58	60
66	70
75	80
84	90
100	100

As we pointed out in September, this table can be used to make a dipstick for any tank that is cylindrical and horizontal, by applying the percentages to the total depth and marking the stick accordingly.

From D. J. L., Pittsburgh:

"Is there any way to figure out how much water would run in through a hole in a boat in a given length of time?"

—Certainly; if you know the size of the hole and how far under water it is, you can calculate the flow exactly with the following formula:

$$D=6/10A\sqrt{2gh}$$

Where: D=Discharge, in cubic feet per second;
A=Area of the hole, in square feet;
g=Acceleration of Gravity=32.2;
h=Head, or depth of water;

For example, say your boat has a hole one inch square located one foot below the waterline.

$$D= \frac{1}{144} \times \frac{6}{10} \times \sqrt{2 \times 32.2 \times 1}$$

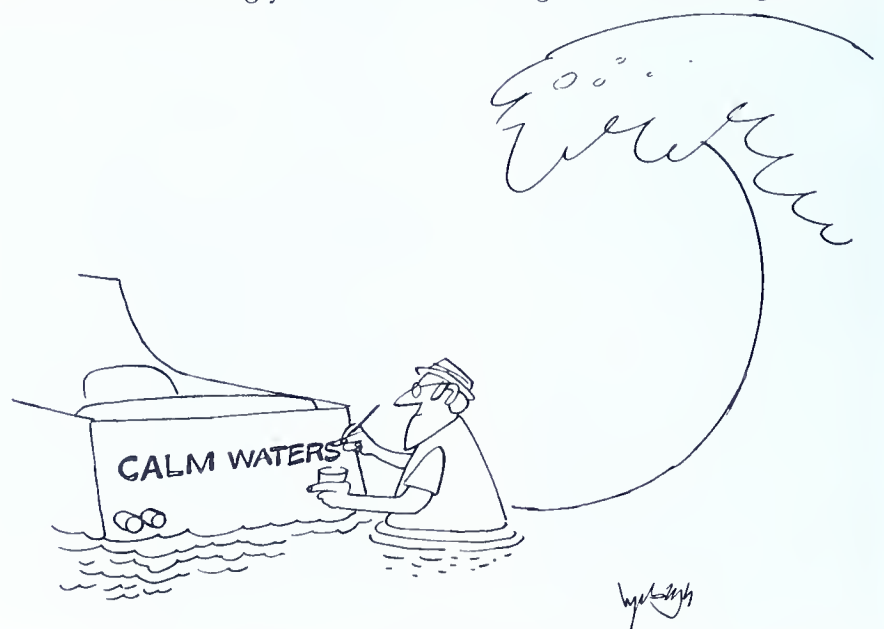
$$D=.0069 \times .6 \times \sqrt{64.4}$$

$$D=.0042 \times 8.03$$

D=.0337 cubic feet per second or, multiplying by 7.5 to get gallons,

D=.24 gallons per second or 15 gallons per minute, (.24 x 60) which comes to 864 gallons per hour, or more than two tons of water.

In other words, it doesn't take a very large hole to sink a good-sized boat.



Winter Trout Fishing



AN ANGLER PHOTO FEATURE

by Jim Yoder

These scenes taken at Opossum Lake on a winter trout season opener reflect the mood of the season. It's cold, but generally quite comfortable. Warmly dressed, all of the anglers in the photos seem fairly contented.

The "Winter Season" opens at 8:00 A.M., on December 1, 1972, on lakes and ponds over 10 acres only and success is dependent, to a great degree, upon the cooperation of Mother Nature. In northern tier counties, the presence of a thin coating of ice on the water may prevent open water fishing while the counties of southern Pennsylvania generally offer a few weeks of fishing before a freeze-over occurs. By the same token, northern anglers begin ice fishing just that much earlier.

The absence of "skim ice" along the shoreline permits the use of a variety of techniques; fly fishing, still fishing, or spin-casting. And although the action is somewhat slower, generally, than the April opening day, there's always the threat of that lunker making off with the bait.

(Above) Opossum Lake in Cumberland County is a winter trout hot spot with plenty of access and shoreline fishing available. (Above left) Here's one way to keep warm! No need to put away that flyrod. Even the purist can enjoy winter trout. (Below) While a thin coating of ice begins to cover the lake, this angler finds the winter trout season a time of quiet solitude. (Below, left) If the pace should slacken, there will always be another angler nearby ready to swap tales of better days afield.



CO-OP NEWS

by Bill Porter

A monthly feature devoted exclusively
to Pennsylvania's Cooperative Nurseries—

Cooperative Nurseries are fish rearing facilities
built and maintained by organized sportsmen
... at their own expense.

Fingerling fish provided by the Pennsylvania Fish
Commission are reared and released in public
waters of the sportsmen's choice
in accordance with policies prescribed by the
Fisheries Division's Cooperative Nursery Branch,
Robert H. Brown, Chief.

“So, as they used to say in Brooklyn, ‘Wait until next year’ when the third and final chapter of the migration work will be effectively written by members of the Gettysburg Area Senior High Science Club.” That was the way the second chapter ended in the November, 1971, *Angler*. Now, a little more than one year later, the third chapter is completed.

The extensive three-year study was original research developed by the high school students under the guidance of their several biology teachers, Gettysburg College computer staff people, Fish Commission personnel, and area cooperative nurseries—particularly the Adams County Fish and Game Association and the Chambersburg Rod and Gun Club. These clubs supplied trout on alternate years and both contributed fish for the final phase of the research—thus the inclusion of the article in *Casting with the Co-ops*.

The first phase of the project was started in 1970 with Middle Creek in Adams County as the study stream. Trout stocked were one-year olds, furnished from the Adams County Fish and Game Association's cooperative nursery. Of the 372 fish stocked, 144 (38.4%) were recovered by shocking and creel census, showing a net movement upstream. The browns swam an average of 816' upstream and the rainbows came in second with an average of 683' upstream. This evidence seemed to refute an old belief that rainbows, particularly, would head downstream. Additional supportive information was gathered, but the big factor was the general upstream movement and the order of movement by species. (See *December, 1970, Angler* for details.)

Carbaugh Run, coursing through Adams and Franklin Counties, was selected for the second year's study with trout being furnished from the Chambersburg Rod and Gun Club's cooperative nursery. The stream was more vigorous in parts of its length than the more placid, rock-strewn

Middle Creek. The change was deliberate to collect additional biological data other than the fish movement.

Of 495 trout stocked, 103 (24%) were recovered. The net movement reversed the first year's trend with a downstream average figure of 1,143' per fish. Rainbows showed the downstream direction of 514' per fish;



A wide range of skills, from “brawn to brain,” went into the fish migration study conducted by the Gettysburg Area Senior High School. Devices ranged from the unsophisticated bucket (above left) used to carry the fish to the stream, to the latest item of man's gadgetry, the computer (above right).



brook trout came in at a minus 1,930' per fish; and browns maintained the pattern at a minus 120'. Some extenuating circumstances made these figures somewhat questionable. The effects of electro-shocking on the larger trout (these were mixed one and two-year olds) caused them to be washed downstream in the fast current before they could recover themselves. A creel census later showed these trout being caught well below their original stocking and shocking points. To a degree, this set the stage for the final year.

The third phase included both of the streams and the two cooperative nurseries. One-year old trout were placed in Middle Creek and one and two-year olds were again stocked in Carbaugh Run. Recovery was confined to extended creel census reports, avoiding the artificial downstream movement related to the electro-shocking.

out of 500 stocked. This represented a 23% recovery with an average downstream movement (net) of 1,499' per fish. By species, the browns (46 of the total recovered) showed an average upstream movement of 401' per fish. The rainbows (70 of the total recovered) showed an average downstream movement of 2,545' per fish. This might be a conclusion to the premise of rainbow movement believed at the beginning of the study.

Things showed a similar pattern on Carbaugh Run. Of 500 fish stocked, 140 (28%) were recovered. The average movement (net) per fish was 1,264' downstream. Brooks showed the greatest downstream net with 1,499' per fish; however, there were more of them recovered. The downstream distances for the other two species were less but closely related.

The general conclusion reached would be that more trout tend to move downstream rather than up-

Green Grass Syndrome

continued from page 7

in the chair. It turned out that he owned a little hotel in a small town in Potter County only a few miles from a stretch of lightly fished brook trout water. And also within a short

drive of the famous Kettle Creek. He assured me I could spend a couple of days in the area next spring, getting my board and lodging at his hotel, and he would direct me to some special hot spots that were not generally known.

Some fishermen would not even tell their own wives of their favorite trout or bass waters, but fortunately, not all are like that. Every small town in fishing country has its old-timer in

the sport of angling. He can be located by discreet inquiries in a lunch room or a store that sells fishing tackle or at a service station or motel. And if the visiting angler is wise enough to confine his questions to broad generalities, he can usually learn much from such a character.

Now we ask you, with all this help available, isn't it possible to find that greener grass right here in Pennsylvania?

Lunker Insurance

continued from page 11

hook. With these small hooks properly honed, a very slight lift of the rod is all that's necessary for the hook to take hold—and keep holding.

Larger hooks, and the trebles such as those found on plugs and other large lures, need to be needle sharp also. The species of fish you are angling for with these lures have hard bony mouths and it takes a really sharp hook to penetrate and hold. One aid I've discovered that will help to maintain your sharpened hooks is the hook bonnet—inexpensive plastic covers that fit over treble hooks. These little helpers not only prevent your hooks from being dulled

by the constant rattling around in your tackle box, but also discourage the tangling that occurs when you have more than one plug in a box compartment. One word of caution if you utilize the hook bonnets, extreme care should be used when removing the hook from the bonnet. They fit rather snugly on the hook and should be removed carefully unless you want some really sore fingers.

There are all kind of hones and sharpening stones on the market today and you should have no trouble finding one, or several, to do the honing job. The tool I find myself using most is a small file called the "Hardee File." It's just five and one half inches overall with a cutting blade

1/4" wide. It is made of very hard steel, does an excellent job, and takes up no room at all in pocket or tackle box. I also carry a few of those little emery boards that my wife uses to file her nails. These work very well for touch up jobs, but should not be used if the hook is too dull. For sharpening fly hooks, I use a very fine Arkansas stone or small file and rub the hook toward the point on all sides.

If you have lost some big ones lately, maybe it's time you pay the premium on your lunker insurance. This is not additional money, just a little time and effort on your part. After all, with all the equipment you carry and use, isn't that hook point the very place where the action begins?

Snow Flies

continued from page 16

small caddis flies, almost microscopic in size, will frequently stir the trout to action when the average fisherman would not expect them to be moving at all. Extremely light rods of a couple ounces, leaders down to 7X and a gentle touch combine to produce good fishing on occasion. Of course, many more fish will be lost on such tackle, but it is possible to take some of the biggest—if things go right.

This is not to say that occasionally you won't make a good catch on the larger lures. Streamers, particularly, will sometimes bring the big ones out from in under the banks or the deep

pools. Large nymphs, in No. 10's and No. 8's are sometimes effective, again, if conditions are right for them. This is more likely to occur when the water is higher than usual, or running dirty, after a heavy rain. But, day in and day out, when the winter water is at normal flow, running clear and cold, the tiniest terminal tackle available is in order. The all but invisible hooks do little damage to the trout, and it is no trouble releasing them without removing them from the water.

On one particular trip, fishing was slow although Barry took seven and each of us in a party of five caught some fish. Clyde Naugle came up with the best fish of the day when he landed a brownie of 16 inches. But, Scott Heimbach and Emil "Tiny"

Rineheimer each scored in the three hours that we fished.

One of the plus values in winter trout fishing is that you are constantly fishing over a good supply of trout planted earlier by the Fish Commission. And, except on the especially nice days, you will have little competition.

Of one thing you can be certain. When ice is freezing in the line guides and the temperature is bumping the bottom of the thermometer, the anglers you run into will be some of the most determined and most skillful in the state.

There is no limit on the number of fish you may catch as long as they are carefully returned to the water. And, there is no limit on the amount of sport available.

FISH TALES

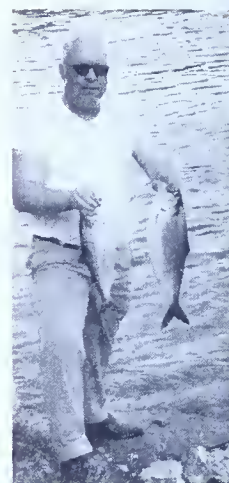
by Doris Katsonis



MICHAEL MAMMY, age 7, fondly holds the 33 inch, 14½ pound carp he caught from the Allegheny River near his home in Pittsburgh. He was using one of his daddy's famous doughballs for bait.



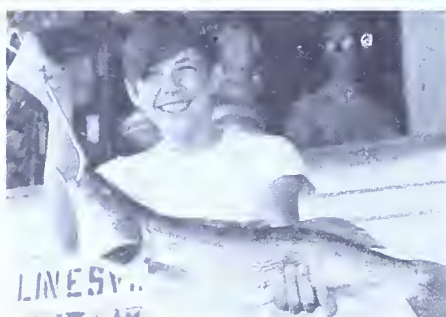
JOE UNTERKOFER of Short Hills, N.J. (left) and **DONALD CICIONI** of Tafton, hold the 41 pound carp taken with a bow and arrow from Lake Walenpaupack last Spring.



A Sunbury youth, **KEVIN MICHAELS**, holds the 10½ inch rock bass taken from the Susquehanna while **LLOYD MCDANIEL** (right) holds the American Shad he caught from the Delaware last May. The larger one measured 25 inches.



"JIGGER" LETRICK, 13, of Clarks-ville caught his largemouth bass near Clark Island in the Pymatuning last May. It measured 18½ inches and weighed 2¾ pounds. It took a jigger.



Another Pymatuning fisherman, **ART AUSTIN**, holds the nice 5½ pound, 26 inch walleye he caught south of Harris Island also in May. Art lives in Linesville.



WILLIAM HOOVER of Pittsburgh (top photo) caught his 41 inch musky from the Pymatuning last April using a white jig, while **ARNOLD FOX, JR.** of Montoursville caught his 47 inch from Hills Creek Lake on a nightcrawler last May.



WENDLE SCHOLL of Lewisburg, holds the 20½ inch, 4 pound channel catfish he caught from the Susquehanna River last May using spinning gear and a worm.



SAMUEL SANDERS of Sel-insgrove, holds the 11½ inch rock bass he caught from the Susquehanna in May using a casting rod and a worm.



A New Bloomfield youth, **RAY DILLMAN, JR.**, caught his 15 inch brook trout from Laurel Run using spinning gear and a minnow.



JOHN LESH of Sunbury, caught this 10 inch rock bass, using hand line and worm from the Susquehanna.



Little KEVIN KOPERA of Patton holds the 30 inch musky he took on a shiner from Glendale Dam and PAUL BEATTY of Weirton, W.V. (right) displays his 15¾ inch crappie caught in the Pymatuning on his first Pennsylvania fishing trip. BRIEN BLAKELY (far right) of Camp Hill holds the two 10½ inch crappies he caught from the Conodoquinet Creek in ten minutes of fishing.



Another bow and arrow fisherman, ROBERT BOSSI of Scranton, holds the large 30 pound carp he landed from Wallenpaupack Creek last May. MICHAEL MARSO, 12, of New Castle shows his catch—a 23½ inch walleye taken from the Shenango Reservoir in May using spinning gear and a worm.

CHRIS SAVIDGE, 5, holds the two carp he caught from the Susquehanna (one 25 and the other 26 inches) near his home in Northumberland and DOUG RENN of Sunbury holds the 10¾ inch rock bass also caught from the Susquehanna using spinning gear and a worm.



This 47 inch musky was taken on a rapala from the Pymatuning by an Elizabeth resident, PAUL ROSCHE. It measured 47 inches and weighed 26½ pounds:

FRANK BRYSH of New Castle cradles in his arms the largest reported musky catch of the year—a huge 52 inch, 50¾ pounder. He landed it from the Pymatuning in May using spinning gear and a sucker as bait.

Another musky from the Pymatuning is held by fisherman DANIEL MROCHEK of Pittsburgh. It measured 42 inches and weighed 19½ pounds and was also taken in May.



JOAN ESTES of Edinboro holds the 15¾ inch crappie taken from Edinboro Lake last May.

FOR OUR NEW SUBSCRIBERS

We receive many more photos than we can possibly publish and have limited the FISH TALES section to pictures of CITATION SIZE FISH ONLY.

Citation applications are available at sporting goods stores or from your local Waterways Patrolman.

IMPORTANT:

Citations are awarded for fish caught in PUBLIC WATERS ONLY! Waters must be open to fishing by the general public without payment of fee. Photos should carry complete information on the back—name and address, species, length, weight, when and where caught and the bait or lure used. Print plainly but do not press with a ballpoint pen—we cannot use photos with writing "showing through" or those which are cracked, blurred or poorly exposed.



DAVID WAGNER of Clarendon holds his 10 inch rock bass taken from the Susquehanna River last May.

Luck & Lures

continued from page 15

this is because the lure is in heavy use and maybe it has a natural action requiring less skill to use.

It also seems that sometimes when a particular lure is fished a lot in any one place, it tends to lose its effectiveness because the fish become wary and refuse to have anything to do with it.

Granted, there is no ideal lure for all fish, but some lures if properly used will take various species of fish.

And this gets us back to the fisherman who consistently scores and does so because he can adapt any one of a few lures to fit a particular situation.

For instance, some fishermen do very well on nothing but jigs, using a variety of sizes and colors. And jigs incidentally, seem to fall in the same category of some other things—you either hate 'em or love 'em. There is no in between.

I happen to like jigs because they catch fish for me but I don't use them exclusively. It wasn't always like that and the following will illustrate what I mean.

One day after work, I decided to hit a stretch of river water for walleyes. My favorite spot on the shore was slightly congested and I decided to move upstream when I spotted a friend from work. I walked over to him and we chatted. Neither he nor his friend had caught anything.

While we talked, I decided to try a white jig with a red/white head that was just itching to get into the water. I snapped it on my #10 swivel and on the second cast hooked a nice walleye. As I reeled it in, my friend looked at me and said, "Why you *lucky* so and so."

I grinned as I put the fish on a stringer and dropped it into the water. Within fifteen minutes I had three walleyes and my friend had a look of frustration about him as he remarked, "Of all the dumb luck."

"Rod," I said, "I'll let you reel in the next one." He just shook his head and looked at me out of the corner of his eyes. I got the message, picked up my fish and left.

Lucky? Maybe. But we were using the same lure and fishing the same spot. My friend had been there two hours without a strike. I'd like to think that I was doing something he wasn't or vice-versa.

But I knew how he felt because I experienced the same emotion when I first started to fish for walleyes. I'd hit them occasionally, but nothing consistent ever happened. Then one day I was invited to fish for them on opening day by Howie Stevens who has since deserted the north to fish year round in the warmer climate of Florida.

We were out in his boat with Jerry Gibson and pickings were slim throughout the morning. Howie was high hook with two fish falling to the old reliable black jig with a black/yellow head.

Jerry was using red/white and green/white L&S Mirrolures and had one fish to his credit. I was

switching hardware and was yet to feel the rod bow under the dead weight of a walleye. Finally Jerry hit another one and we dropped anchor. When Howie scored again, we figured we were into a school.

I couldn't even connect with the same lure as Howie on his side of the boat. I uttered choice adjectives, returned to fishing my side of the boat and then glumly said, "I sure don't know what I'm doing wrong."

"Are you working the jig as you reel in?" asked Howie.

"Yep," I curtly replied.

"How?" he queried.

"Oh, just giving it a quick short jerk about every six or seven turns of the reel," I said unenthusiastically.

"Try mixing 'em up," he said. "A quick twitch, reel in a couple turns and then give a couple more twitches. Always mix 'em up."

On the next cast I took his advice. After the lure settled to the bottom I twitched the rod, reeled in, and then twitched twice again. I continued this as I reeled in. And do you know what happened? I got a strike!

I finally hit the combination! The color was the same but the action made the difference.

Howie and I both limited out and Jerry, who preferred to stick with his lures, ended up with four.

Up to this point, no mention has been made of any of the *variables* that also play an important part in being *consistent*. For knowing when, where and under what conditions to use a lure goes hand in hand with knowing how to use it.

For instance, it's unlikely that you'll catch large-mouth bass with a popper or other surface lure in the shallows during the heat of a summer day when they've retreated to deeper and more comfortable waters a little farther off shore. And by the same token, you're not apt to find them in the deeper water during the early morning or evening hours when they're back in their warm, weedy, shallow home.

The moral of this is that if more anglers would take a little more time in learning the how, when and where in the use of their lures, they'd find themselves among the 10% who catch 90% of the fish more often.

So give some of your lures a fair shake and at the same time improve your rate of success. Select a half dozen, dozen, or whatever, from your tackle box, and put the rest away.

Then learn how to use the ones you've chosen. Don't be bashful about trying the advice of fellow anglers and your Waterways Patrolman. There's also a lot of good dope in magazines and books. Most lure manufacturers also give tips on how to use their lures most effectively.

You'll find a lesson in knowing what not to do as well as knowing what to do with your lures. And with this will come the confidence in the lures you are using so when you do start catching fish consistently, you'll know that it's not a fluke.

TAKING A CLOSER LOOK

by Tom Fegely

Natural Baits for Winter Fishing

As an ecology teacher and outdoor education specialist, I have the opportunity to teach kids the wonders of nature first-hand. One popular activity is a mid-winter field trip in search of dormant insect larvae. Youngsters soon learn to recognize the goldenrod galls and search out the small white worms that infest corn stalks.

Ice fishermen, too, can benefit by taking a short course in "cold weather entomology" and using the knowledge to stock their bait pouches.

One of the best known winter baits is the tiny fly larvae found in the oval swellings on old goldenrod stems. Break off several dozen of these galls and keep them intact until you're ready to use them. When sliced open you'll find a fat, little grub inside. If there's a hole in the gall you're too late, the worm's already been eaten by a woodpecker or chickadee. Should you want to save some bait

between ice fishing trips, store them in a cool place. Use several on a small trout hook for bluegills and perch.

While collecting goldenrod galls, you'll probably pass by a corn field or two. Split open a few dry stalks and look for the small white corn borers that overwinter there. Not every stalk houses a worm, but if you find one, chances are the field has thousands more.

On your winter walk you may come across the "lantern" nest of the paper wasp suspended from a branch. Inside are the dormant adults and their larvae, both good as winter baits. You can avoid trouble by placing the nest in a plastic bag since a warm garage or basement will revive the ill-tempered adults. Break off chunks of the combs and take them along, extracting bait as you need it. Nests of the mud dauber wasp, found under eaves and in barns, work equally well.

If any of your neighbors are organic gardeners, they'll very likely have a compost pile of rotting leaves and other plant matter. Dig beneath



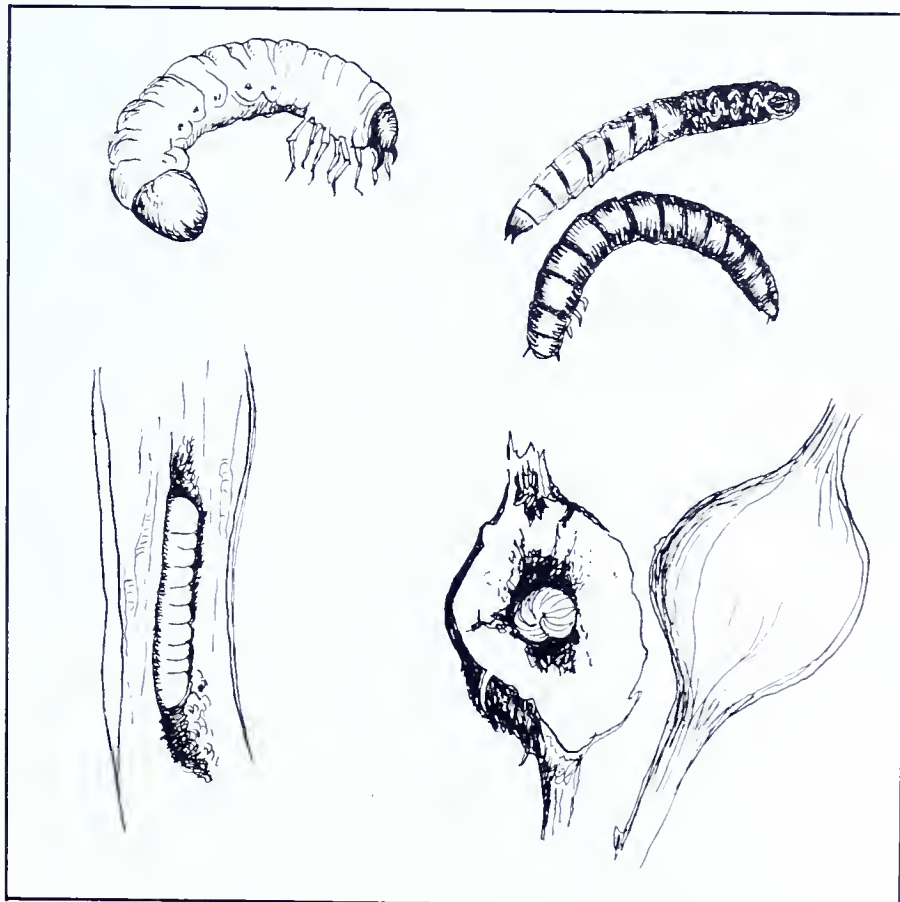
Natural baits are most effective when jigged although they can be used with tip-ups.

this and you will discover the white larvae of the June Bug or May Beetle. Sawdust piles at lumber companies are also a good source for these grubs. A shovel is usually sufficient for chopping through the frozen crust. After that, digging is easy due to the warmth caused by the bacterial action of the organic matter.

The local grist mill should also be able to supply you with some bait. On a trip to buy dog food or bird seed, ask the miller where you can pick up some golden grubs (also called meal worms). These inch-long tannish-brown beetle larvae can be found in and beneath old sacks of moist grain. They can also be easily raised at home throughout the year. Collect extras and allow some to mature and lay eggs. All you'll need is a roomy container and a supply of grain or cereal which must be replenished and moistened occasionally. Most bait shops sell meal worms as well as wax worms (bee moth larvae) which are equally popular on frozen Keystone lakes.

Besides the ever popular shiners which most ice fishermen use, "on the scene" baits such as perch eyes and white belly strips also prove effective. These attract attention best when jigged rather than used on tip-ups.

So, slip on those hiking boots and search out some of that "free for the pickin'" bait. It's your ticket for a season of ice fishing fun.

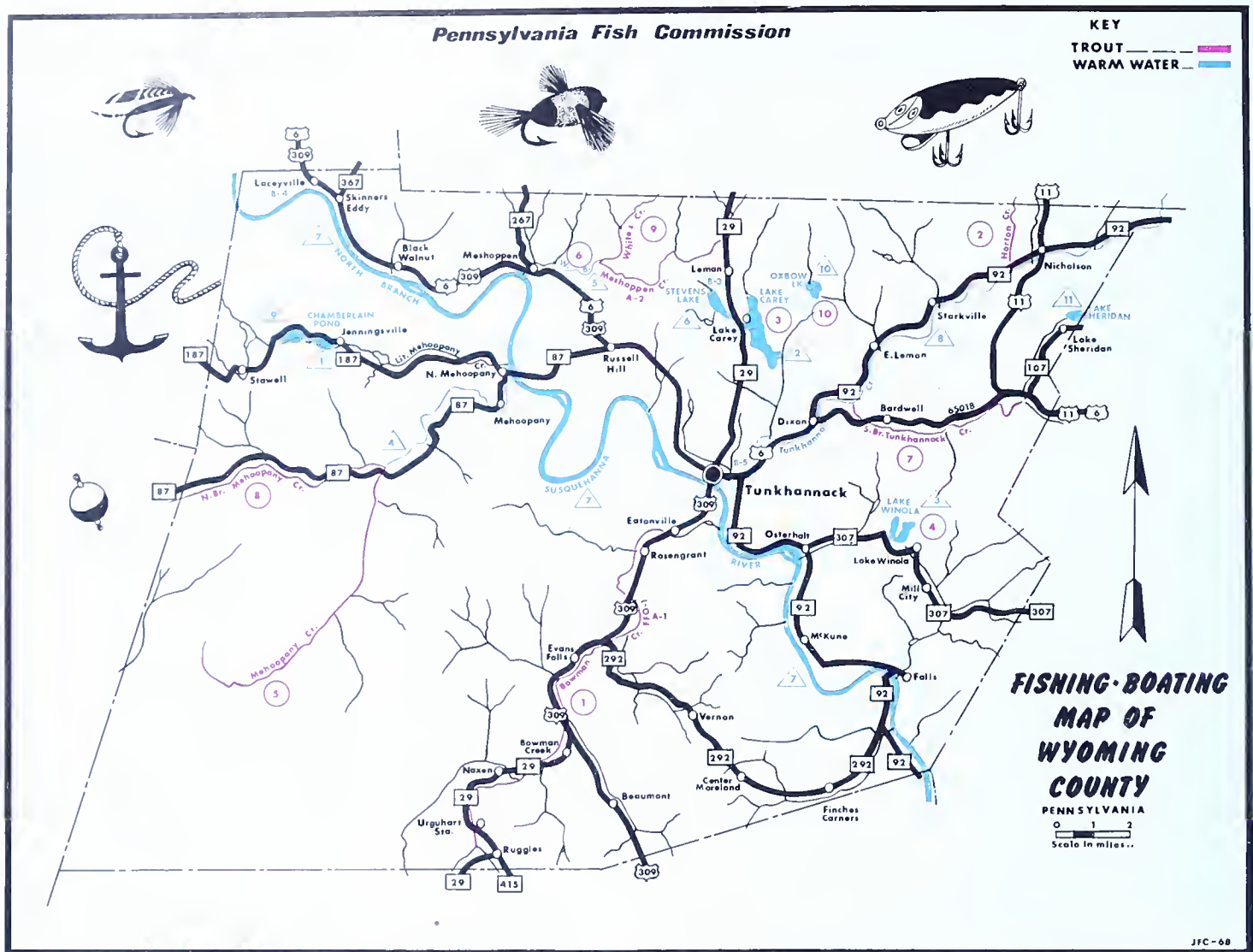


Upper left, June Bug (also called May Beetle) larva.

Lower left, Corn borer in stalk of corn.

Upper right, Golden grubs (also called mealworms)

Lower right, worm in goldenrod gall.



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This set of maps includes every county in the state. Trout waters are indicated in red; warm water areas in blue. The reverse side of each map lists Seasonal Hot Spots, Access Areas, fishing areas under Special Regulations, Information Centers, and a key to the Fish Species in each of the numbered areas on the front of the map. They list most major highways and the traveling angler or boater will find them an extremely helpful guide.





